THE BUILDER

A JOURNAL FOR THE ARCHITECT AND FOR ALL INTERESTED IN THE CONSTRUCTIVE AND DECORATIVE ARTS.

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THE LONDON BUILDING TRADE DISPUTE.

THE dispute in the London Building trade has entered upon a new phase, and one fraught with serious possibilities. For the second time the rank and file of the operative unions have rejected provisional agreements arrived at by negotiation between representatives of employers and operatives. In the first case those representatives were drawn mainly from the general associations of the respective parties; in the second case they were drawn from the councils of the disputant associations.

After each vote the men's representatives have put forward a claim to have recognised a right to strike any works upon which non-union men are employed, and this claim has been firmly refused, as of necessity it must be. Such a claim on the part of the men seems to show a lack of appreciation of the local conditions.

The present struggle has demonstrated the presence of a large element of non-union labour, amounting in the building trade alone to some 10,000 men; for the unions to claim the right to drive these men out of employment is absurd.

If the employers were willing to employ none but union men they could not, with the supply of union labour available in the country at present, man their jobs. Until the trades unions are prepared to guarantee an ample supply of labour, and to refuse to work for any but associated employers, it is useless their claiming the right to strike jobs where non-union men are employed, and the sooner they realise that fact the better.

The negotiations which produced the provisional agreement which has just been rejected were entered into by the London employers at the request of the National Federation of Building Trades Employers in response to an indication on the part of the London operatives that they wished to negotiate further, but a time limit was fixed, which expired on May 28, and, as no settlement has resulted, the London employers have now placed the matter in the hands of the National Federation, a meeting of the Executive Council of which is to be held on the 9th inst., and the Council has already shown its intention to recommend a national lock-out in support of the London employers. This is the new phase, and it opens up very serious possibilities. Let us try to appreciate what they are.

Hitherto the general unions, to which the London unions concerned in the struggle are affiliated, have remained passive. The principle of both employers and trades union organisations is that the local branches enjoy a local autonomy, which is not interfered with by the national bodies so long as the local bodies feel themselves competent to manage their own affairs, including disputes; but if a dispute becomes national in character the power to settle the dispute locally passes into the hands of the national bodies, who may decide either that the dispute must be settled forthwith or that it must be fought out nationally, and eventually settled nationally by a vote of the whole body.

The action of the National Federation of the employers will perforce bring into active participation the general unions, and it will be for them to decide whether the claim of the London operatives is one which they can fight on or whether, in their opinion, the London men ought to accept the conditions which their representatives negotiated for them. The primary object of trades unionism is to secure by collective bargaining a standard of wages and equitable conditions of employment. This implies that working rule agreements must be established, since without them a standard cannot be maintained.

The existence of such agreements implies that they must be observed faithfully by the parties to them, their only sanction being the honour and good faith of those who make them. Trades unions have not hitherto been able to insert in such agreements any condition barring the employment of non-union men, when such a condition was resisted by employers, as it has been generally hitherto.

Now, trades unionism is vastly stronger in the North and centre of England than it is in London, and it does not seem that the general unions concerned are likely to consider it worth while to fight for the establishment of that principle in London, where there is so large a body of non-unionists, when they have not found it practicable to do so in the North, where they are strongest.

Moreover, where they are strongest trades unions have become so by legitimate methods of organisation, which have not disturbed their good relations with their employers, nor imperilled the existence of their working rule agreements, and they may very well consider that what they have done their London brethren ought to be able to do also.

Besides, the existence of working rule agreements implies for both parties the right of quiet enjoyment of the advantages of the agreement, so long as the parties observe its conditions, and to upset that quiet enjoyment, by seeking by sympathetic and lightning strikes virtually to impose upon employers a condition as to non-union men which is not implied in the agreement, is to commit a grave breach of it and to imperil it. Much more so is this the case when, as in the London working rule agreements, it is expressly provided that no question shall be raised as to the employment or non-employment of any man, whether union or non-union, and, as is well known, it was the persistent breaking of this condition which brought about the present dispute.

On the other hand, provincial employers, in common with all other employers, have always firmly resisted any attempt to dictate to them whom they shall employ; they have no objection to trades unionism so long as its propagation does not interfere with them in the conduct of their businesses and does not deprive them of the quiet enjoyment of their working rule agreements; they consider that strong well-organised unions result in strong organisations of employers.

Working rule agreements, though beneficial to employers, are not vitally important to them as they are to trades unions. What employers do attach vital importance to is the sanctity of agreements, as it is upon this basis their businesses are organised and carried on.

It is evident, therefore, that the provincial employers are likely to rally to the support of their London brethren, and to vote solidly in favour of a lock-out recommended on this ground by the Executive Council of the National Federation.

We have indicated what we believe to be the main considerations which will weigh with the national organisations of the employers and operatives, and they lead to the inference that a peaceful solution will be found; should it unfortunately be otherwise, a most regrettable struggle on a national scale will ensue, which it is to be feared will not be confined to the building trade, and a national dislocation between labour and capital leaves us more or less at the mercy of our commercial rivals, and may mean that we lose what can never be regained.

THE GROWTH OF MODESTY IN MODERN ARCHITECTS.

MODESTY, we all know, was never the characteristic of Michelangelo, who would refuse to work for a Pope, or represent a cardinal in hell with equal alacrity, and build fortifications, design a tomb, or produce a painting 120 ft. long with the same fiery zeal. His successor, Vignola, the architect of Caprarola and of the Escurial, worked on an even greater scale in his single trade of architecture, and his treatises on perspective and on the Five Orders were, and remain, masterpieces; but modesty was not to be expected from a man who at Caprarola was encouraged to rival the mountains and precipices which surround his palace, and took with him to the Escurial two-and-twenty architects, the most celebrated of their day, as his assistants in his work. Bernini, greatest of Baroque architects, as of modern sculptors, the guest of kings and popes, the creator of much that we know best in Rome to-day, had no temptation to undervalue himself, and would carve a mattress and pillow for the Sleeping Hermaphrodite, one of the finest antiques in the possession of the French Crown, or melt the bronze roof of the Pantheon and recast it, as the Baldacchino of St. Peter's, with the same readiness that he displayed in designing cupids and garlands to freshen up an ancient church, or carving an angel, a saint, or a female figure, more pleasing than spiritual, for a papal tomb in St. Peter's. Fontana, Carlo Maderna, and Palladio had similar successes; so had Scamozzi, whose works were translated into French and English, and who illustrated his own principles by perhaps the greatest of his works, the Strozzi Palace at Florence. Scamozzi's ungenerous depreciation of Palladio was resented by the great English exponent of the latter's art, Inigo Jones, when he visited the aged architect in 1614, in the course of his second Italian journey; indeed, except for his leaving £100 for a monument to be carved with reliefs representing the Corinthian portico of old St. Paul's and the church of St. Paul's, Covent Garden, which he therefore appears to have considered his greatest works, Inigo Jones seems to have been a modest man. Wren certainly was so, in spite of the proud boast as to his true monument in St. Paul's Cathedral; not so Wren's junior, William Kent, whose handsome volumes, entitled "The Designs of Inigo Jones," contains a number of designs by himself. It is undeniable that the Horse Guards and Devonshire House give Kent an assured position among the architects who have added to the dignity of London, but his architectural paintings, of which, according to Horace Walpole, the staircase of Kensington Palace is his least defective example, have only an antiquarian interest, and he had, along with a good share of the vanity which led him to execute altar-pieces and to create country houses, so small a sense of personal dignity as to accept any commission that was offered him—a picture-frame, a cradle, and even a lady's petticoat "decorated with columns of the Five Orders."

As the eighteenth century advanced self-advertisement on the part of a professional architect became rarer. The Brothers Adam, for instance, had too high a sense of the greatness of the antique to let self intrude into works which professed to deal with general principles or particular monuments, while during the Neo-Classical revival architects were too many for any individual to have the opportunities of laying down the law to others and of making their own position as leaders of taste secure that had fallen to the lot of Kent. Competition has its evils, and the lot of the modern architect its thorns; but if modern conditions are against the creation of fantastic masterpieces, the Caprarola and great monuments on the scale of the Piazza of St. Peter's, architecture as a whole has gained by the change. After the craftsmen's guilds which had created greatest works of the Middle Ages had passed away, and had been succeeded by the rule of the omnipotent architect-dictators of the sixteenth and subsequent centuries architecture rather than the architect came to its own place, and the name of the one great exception of the nineteenth century, Baron Haussmann, is not wholly blest by those who know the happier results produced by the contrasted efforts of several masters in laying out the different streets or constructing the various buildings of the modern capital.

NOTES.

The Art Standing Committee.

THE action of the Art Standing Committee of the R.I.B.A. in seeking to particularise its functions more clearly as already defined, regulated, and prescribed by the by-laws in conformity with the Charter suggests that a general or a joint Committee to interpret the terms of the by-laws for all the Standing Committees and to define their spheres of action might tend to greater simplicity of organisation. Incidentally it is noticeable that a Committee which, in addition to the preservation of national monuments, concerns itself with the artistic aspects of new works and public improvements and makes suggestions thereon, which considers any course that should be adopted for the purpose of securing a higher standard of architectural design—taking into consideration both the training of the architect and the education of the public—and generally deals with all matters tending to advance the art of architecture has a fairly wide scope of action. We miss any reference to "the acquirement of the knowledge of the various arts" connected with architecture, which might naturally be expected to come within the sphere of influence of an Art Committee; but with this exception the Committee might almost be said to concern itself with all the principal objects of the Institute as recited in the original Charter. Art may be only a branch of the profession of architecture as implied by the by-laws, or, on the other hand, architecture may be simply a branch of art; but, whichever way we look at it, the constitution and the *personnel* of the Art Standing Committee is evidently a matter of the first importance. It has been generally understood that the Council of the R.I.B.A. is so overwhelmed with routine business as to have little time for discussing new ideas or for initiating new movements. If it is the recognised duty of the Art Committee to range over the whole field of architecture and to make suggestions, it seems probable that all initiative and progress in the art of architecture is more likely to originate in the Art Committee than in the Council. If this is so, the services of all the best artists in the Institute should be secured for the Art Standing Committee, whereas the names of the great majority of them are now conspicuous by their absence.

The Revised Scale of Charges.

THE difficulty of obtaining a quorum at special general meetings of the R.I.B.A. called to consider the proposed revision of the scale of charges points to a lack of interest on the part of the members which will be considered creditable or the reverse according to the point of view adopted. A lofty indifference to the amount of his hire might perhaps be expected from the labourer who is not dependent on the reward of his labour, but hardly from those who are. All the same it is quite possible that where the labour is in itself of absorbing interest, and has other rewards than merely pecuniary ones, the vast majority of the labourers in the vineyard are not greatly concerned as to the precise terms of their hire so long as the amount is sufficient to provide a decent living and enable them to labour on joyfully with minds free from sordid anxieties. It may be that in the practice of architecture, or of any other calling in which the reward is not and cannot be in exact proportion to the amount of work done—in which the crust must be taken with the crumb and one thing made to pay for another—a scientific scale of charges would not make so much practical difference to the yearly income of the average practitioner as to cause him to look upon it as a matter of the first importance. Some feeling of this sort may perhaps be held to account for his indifference, if he is not to be credited with being far more interested in tending his vines. Complete confidence in the Council may, of course, be at the root of the difficulty, but, even so, formalities must be observed and the proposals approved by the general body. If for no other reason than to get this matter out of the way and clear the ground for that work of raising the standard of the labourer's skill, which is the surest way of raising the standard of his wages, it is to be hoped that a quorum will be found at the next meeting to get the question settled.

Flies and Market Gardens.

A MARKET garden may not in itself be a nuisance, but it is evident from a recent case that it can be so conducted as to cause one, especially when intensive culture is being carried on. It may not always be necessary to keep a large heap of rotting manure stacked against your neighbour's garden wall to annoy him with its offensive smell and to infest his house and garden with flies, but where so much manure must be used in the ordinary way of business there seems a difficulty in reconciling the successful conduct of this industry with the amenities of a residential district. In the nature of things a market garden should be near its market, but since the house fly has come to be recognised not only as the nuisance he always was, but as a positive danger to the public health, there is a certain incongruity in surrounding thickly-populated districts by tracts of market gardens so conducted as to serve as a breeding-ground. Science may be able to point out a way of so treating the manure that it ceases to attract the fly without losing its fertilising properties, or possibly artificial manure may help to solve the problem. The passing of the horse points in this direction, but in the meanwhile the sanitary officer might well keep a watchful eye on a question which may even have some slight interest for the town-planner.

ARCHITECTURE AND SCULPTURE AT THE ROYAL SCOTTISH ACADEMY.

In a preface to the catalogue of the eighty-eighth annual exhibition of the Royal Scottish Academy the scope of the Exhibitions is defined briefly. They are confined, in principle, to the works of living artists, but the Council is authorised to include examples not only by distinguished foreign artists now living, but also by deceased contemporaries who may have specially influenced the art of the present day. In accordance with this provision the present Exhibition has in its architectural room contributions from French architects and illustrations of the work of two distinguished British architects recently deceased, Mr. John Honeyman, of Glasgow, and Mr. Belcher; while the Sculpture section is made particularly interesting through the inclusion of a collection representative of Belgian work during the last ten years, including examples of four leading sculptors recently deceased. Several of these works have been loaned from the National Gallery at Brussels.

The architectural works shown are sixty-one in number, and the method of presentation is as varied as the character of the work represented. The frankly "show" perspective drawings which form such a feature of the Royal Academy are not much in evidence here, if we except those which we have already seen elsewhere, and the room no doubt loses in interest to the general public thereby, as photographs and geometrical drawings, however good, give a less impressive and attractive version of the architectural happenings of the year than clever pictures, in which unfortunate details can be suppressed or unsympathetic surroundings removed. Still, good photographs, with explanatory plans, are probably the best method of showing architectural exhibits.

It may be said at once that there are few works on view which can be classed as important either in magnitude or architectural interest, and the casual visitor will come away with the impression that architectural activity is dormant in Scotland, or that Scottish architects are not sending worthy examples of their prowess to grace the walls of the Academy.

The "centre-pieces" of the room are typical French student drawings, Nos. 536 and 537 being the plan and section of a monumental royal sepulchre by M. Paul Delaon; while facing these at the other end we have Nos. 565, 566, and 567, plan and two sections of the hall of a legislative palace, by Gaston Castel. Both are works of a masterly largeness of conception and draughtsmanship, and, if somewhat exotic in their surroundings, give a welcome note of romance among the prosaic realities which adjoin them. Other drawings whose origins are obviously French are Nos. 542, 562, and 574. These three are representations of architectural detail in three different periods, and the methods of draughtsmanship employed are also distinctive. No. 542 is a drawing of late Gothic detail in pencil, with heavy colour washes. No. 562 shows the well-known tomb of Count Ugo in the Church of the Badia at Florence. This masterpiece of Renaissance detail is shown with careful yet spirited draughtsmanship in light colour washes by M. Gaston Castel, and it is interesting to compare the results obtained with those in No. 574, a drawing of Romanesque detail—the well-known portal at Arles—by Mr. Douglas Ellington. This is in pen-and-ink, and is a carefully-composed drawing, with large-scale details grouped in the foreground, and worthy of the most respectful attention. We admire it, but would never aspire to emulate it.

Another French exhibit is the restoration of a Parisian mansion (No. 546), by M. Roger Geron. This is a fine wash drawing of a nicely-proportioned courtyard façade refined and domestic in quality.

Turning to the native work, and particularly that shown by the Academicians and Associates, we are disappointed. Sir Robert Lorimer is represented by two ink sketches of a cottage at Colinton—picturesque but unimportant—and a very slight sketch of a proposed market cross at Paisley of a traditional type. Mr. Hippolyte Blanc has two frames, Nos. 539 and 540, the first containing a poor water-colour drawing of a commonplace house, and the second a wash drawing of a mansion of Georgian type, with a good many unnecessary columns and breaks about it. The most worthily represented of the Academy members is Mr. Kinross. His illustrations—photographs—of the Mansion House of Manderston, Duns, show a fine classical residence in a worthy setting of beautiful gardens. The Renaissance interiors are reminiscent of the Adam's manner, but with much originality and great care in detail.

Mr. Burnet has a coloured perspective of a tailoring factory near Glasgow, which presents a successful solution of a commercial problem. Mr. Marshall Mackenzie has three frames of photos of a church at Forfar evidently not yet quite finished. These show a building which is simple in detail and very reminiscent of St. Machar's Cathedral at Aberdeen. No. 580 is a coloured drawing of the interior. This seems somewhat low in proportion, and the drawing is crude. Mr. Paterson has three photographs of offices at Scotstoun of no special interest, while Mr. Miller has two large photographs—interiors—of his Institute of Civil Engineers in London.

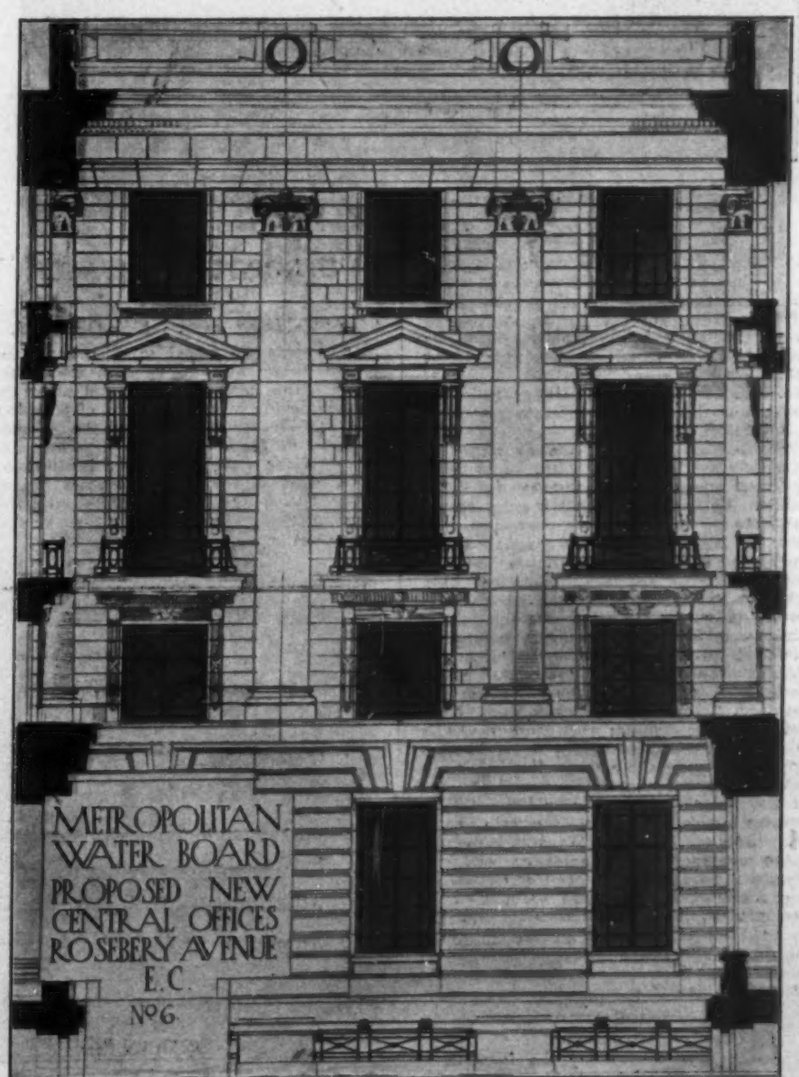
It is interesting to turn to the half-dozen frames containing illustrations of the work of the late Mr. Honeyman. These contain water-colour drawings and photographs of designs and of executed work which prove his versatile talent and earnest care. It cannot be said that his work has had much permanent influence on the architecture of to-day, but it shows him to have been a man of conviction and enthusiasm who faced the varied problems of his many years of practice with an open mind. His Gothic is the style of his day, uninspired and thin in character, but conscientiously complete. His water-colour drawings will bear comparison with those of most of our present-day perspective artists.

The late Mr. Belcher's memory is honoured by the exhibition of drawings of one of his finest buildings—the Institute of Chartered Accountants—and an interior view of his design for South Kensington Museum.

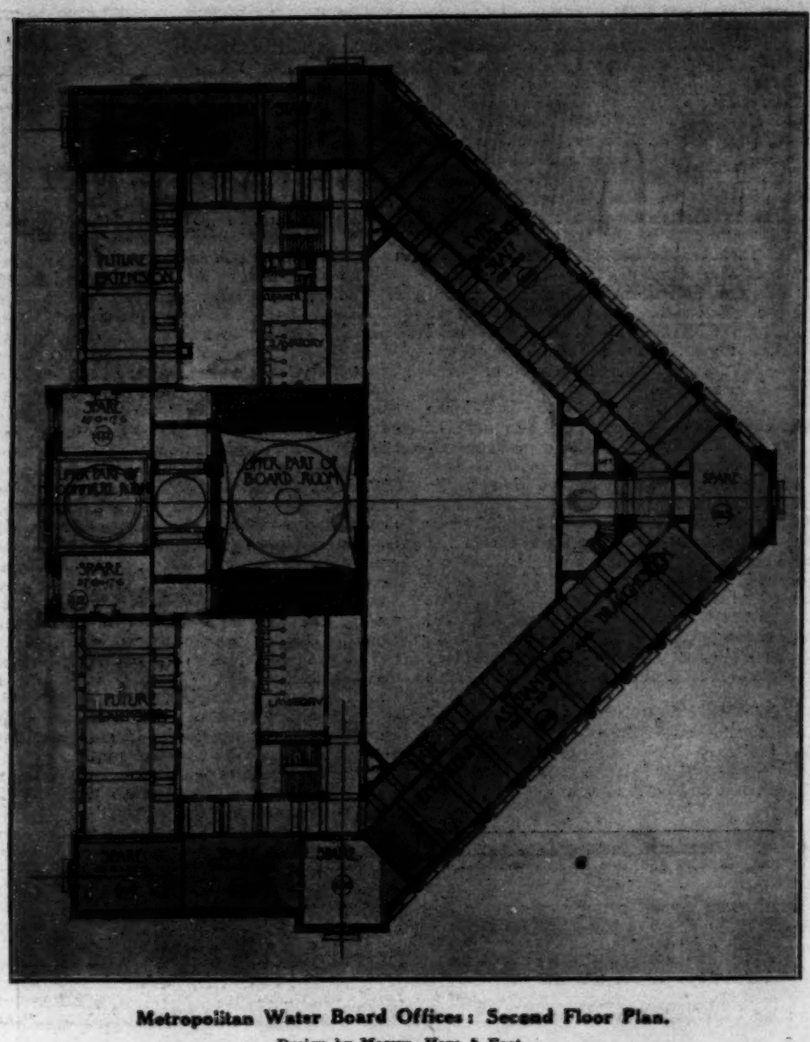
Taking the principal other works as they appear in the catalogue, No. 532 shows three photographs of the Moray House Training College by Mr. A. K. Robertson, of fair merit; No. 538 is a house in Argyllshire by Messrs. Cousin, Ormiston, and Taylor which has repose and dignity. Messrs. Peddie and Forbes Smith have two frames, Nos. 541 and 592, containing photographs of chancel screens, panelling, etc. These show rich late Gothic woodwork of excellent detail. Port-en-Alls, Cornwall, by Philip Tilden, is an interesting stone building shown in a nice pen drawing.

No. 549 is a drawing of Wallingford Court, Berkshire, by Messrs. Detmar Blow and Billerey, which we have seen elsewhere. Three frames contain illustrations of additions to Haggerston Castle by Mr. James B. Dunn. These are very complete, as they include plans, details, and photographs, and show a house of considerable architectural pretensions. The extent of the additions is not quite clear, but the result is a dignified and harmonious group. No. 555, the loggia view of a London house, by Messrs. G. and A. Gilbert Scott, is a beautiful drawing, which we are pleased to renew acquaintance with. Mr. James A. Morris shows two frames (Nos. 560 and 564), the first containing coloured drawings, plan, and elevation of a small church of interesting character. The tower of this seems rather low. The second contains similar drawings of a small private chapel, which seems unnecessarily complicated and broken up both in plan and elevation. Troqueer, Colinton, is a rather commonplace house. No. 569 is a detail drawing of Mr. Truelove's premiated design for the new offices for the Port of London Authority and is a fine piece of draughtsmanship.

Mr. Peddie shows interior views of Melrose Parish Church, a Renaissance building in



Metropolitan Water Board Offices.
Design by Messrs. Hare & East. (See page 664.)



Metropolitan Water Board Offices: Second Floor Plan.

Design by Messrs. Hare & East.

which very effective use is made of plaster vaults; while No 587, by Mr. Keppie, also shows some Renaissance interiors of a church at Greenock. This appears to be a chancel addition to an existing building, and the photographs show some excellent wood and plaster detail.

No. 588, the interior of a Gothic hall, is a water-colour drawing of moderate merit by Mr. J. S. Morton.

The Sculpture section of the Exhibition is particularly good this year with, as we have mentioned before, a preponderance of Belgian exhibits. Every one of these is worthy of the closest study, and many are masterpieces of plastic art. It is a pity that the space available, though good in many ways, is not sufficient to allow of a better arrangement. Very few of the works can be seen properly, and the crowding together of various pieces detracts from the individual interest. We cannot here attempt a detailed examination of the exhibits. The Belgian collection, to name a few only, contains "Le Grison" and the "Ecce Homo" of the late Constantin Meunier—the former a work of the most impressive dignity; while many works by the late Julien Dillens and Charles Vanderstappen testify to the vitality of the Belgian School. Many of the works are in bronze, and the difficulty of suggesting full yet light draperies in this material are shown in one or two. "Attitude," by Rich Wonters, is notable for the squareness of its modelling; while the "Femmes de Pêcheurs" of Pierre Braecke shows a remarkable use of the material—dark-green marble, heavily veined—to suggest the driving storm against which the two figures are struggling. The native works are rather overshadowed, but there are several excellent busts and subject pieces.

CHAPEL, OXFORD.

Viscount Bryce is to lay the foundation-stone of a new Presbyterian Chapel for students at Oxford. The architect is Mr. T. P. Figgis, F.R.I.B.A., Old-square, Lincoln's Inn, W.C.

METROPOLITAN WATER BOARD:

COMPETITION FOR NEW OFFICES.

THE designs submitted in this important competition are now on view at the Water Board's offices in Savoy-court, and afford an interesting study of various types of planning. With the exception of one of the selected architects, we think the choice of competitors by the Water Board has been justified by results, most of the six competitors having submitted schemes which, while open to criticism, are fair and workable solutions of the problem set.

The site may be described as a triangular one, with two sides truncated, forming shorter angular boundaries, one of which forms part of the Rosebery-avenue frontage, on which the main entrance to the offices was to be placed between two points indicated.

The elevations were to be treated in a dignified and suitable manner, bearing in mind that, with the exception of Rosebery-avenue, any new roads would be subsidiary thoroughfares, not in any sense requiring important treatment. The building generally was to be designed on strictly economical lines, the purport of the building being utilitarian.

The height of floors was to be 13 ft. generally, competitors being at liberty to make the principal floor on which the Board and Committee rooms were to be placed somewhat higher.

Designs were to be prepared with due regard to the ultimate development of the whole of the site when the latter was available by the closure of the filtering-beds and removal of the workshops and engine-house.

The cost of the buildings was not to exceed £85,000.

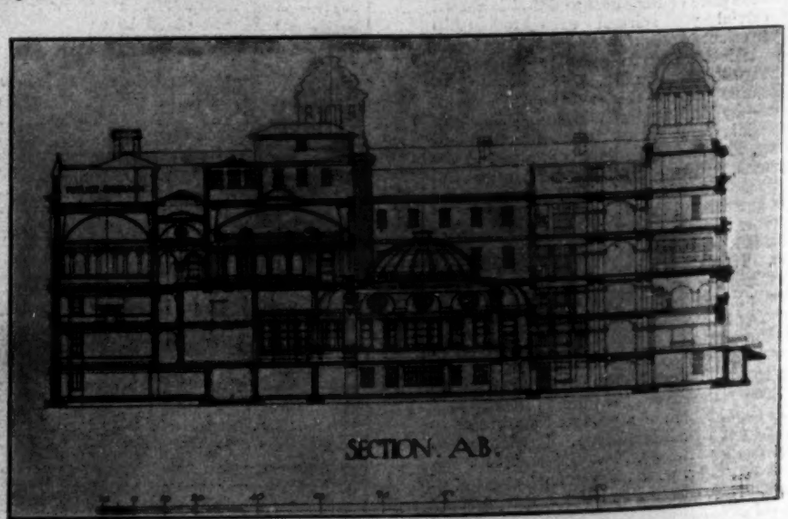
The accommodation to be provided as scheduled was of a purely utilitarian character, the only section of it giving possibilities of architectural design being the Board-room, 2,000 ft. in area, to accommodate eighty-five members and fifteen officials, with a public gallery having separate entrances from the streets, three Committee-rooms, and the large accountants' office, which forms the principal feature of the ground floor. The Rental Ledger office was to be 7,300 ft. in area; the Accountancy Section, 2,000 ft.; and the Expenditure and Examination Section, 1,160 ft. The usual officials' rooms were to be in close connection with or adjoining these large offices. The problem therefore was similar to, but on a smaller scale than, that laid down in the Port of London competition, and resembled in the main the problem to be dealt with in the design of banks.

No less than two subsidiary staff entrances were to be provided for clerks, and passenger lifts, not exceeding three in number, were to be arranged in convenient positions.

The problem in such a case is, first, the selection and arrangement of positions for the various entrances and staircases; and, secondly, the form and arrangement of the large Accountants' Department and its counter space. The upper floors obviously in every design consist of a range of offices facing the frontages and internal areas; and it is on the disposition of corridors, areas, and spaces that the merits or faults of the various designs depend.

The four best designs submitted are, in our opinion, those of Mr. Austen Hall, Mr. Edwin Cooper, Messrs. Brown & Barrow, and Messrs. H. T. Hare & East, three of which we illustrate in this issue, and, as will be seen, each one of them has solved the problem in a different manner.

The winner, Mr. Austen Hall, places his Accountants' Department at right angles to the shorter part of the Rosebery-avenue frontage, and carries the main corridor across the main front and along the two triangular faces, where



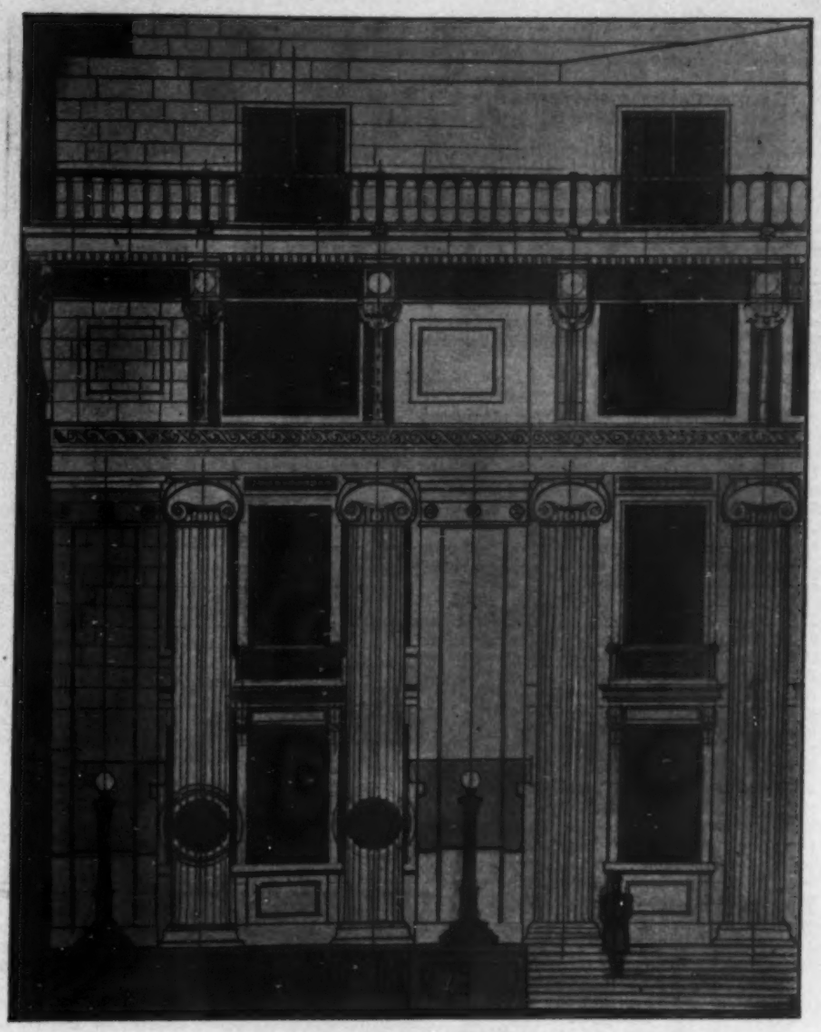
Metropolitan Water Board Offices.

Design by Messrs. Hare & East.

it terminates in two staircases, the third stairway being at the apex of the triangle facing on the internal area. The hall of the Accountants' Department is lighted by three circular domical lights. No attempt is made in this scheme to shut the members off from the staff entrances and stairs, the arrangement being that of an office building of no special importance or character. The planning is generally simple and direct, but of all the schemes submitted it is the one which is most utilitarian. The Supervisors' Section, which had to be in close connection with the Accountants' Department, stretches along the two sides of the triangular portion of the site. On the first-floor plan the various offices surround two areas—a triangular and rectangular one, the latter surrounding the centre portion of accountants' office. The Board-room occupies a central position over the principal entrance; the Committee-rooms and library are placed between the two main staircases along the western front of the site. The remaining accommodation on this and other floors is official in character.

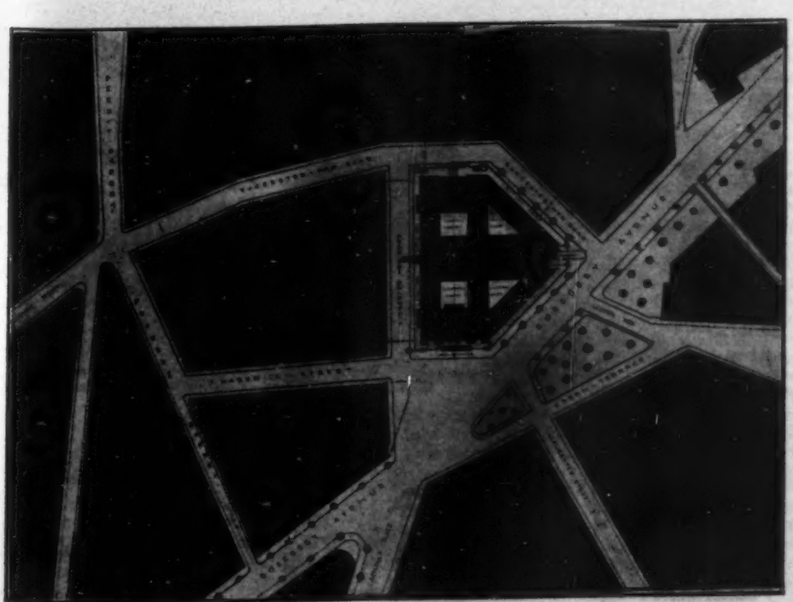
The elevational treatment is very simple, if not bare in composition, of a very late Renaissance or Neo-Grec character. It has the groundwork of a satisfactory design, but gives the appearance of a first sketch rather than of a finished scheme, and, if taken in this sense, we believe a satisfactory scheme architecturally may result from it. If, on the other hand, it is carried out as shown it will fail in architectural interest and refinement. The strong points of the scheme are its general simplicity and good lighting of the accommodation; its defects, the imperfect planning of details. The staff and members of the Board practically use the same staircases and approaches—an arrangement which would be considered most defective in a municipal building of like accommodation. How far this counts in this particular case we cannot say.

Messrs. Hare & East's design is much more ambitious in general character, but, as compared with the winning design, is less well lighted. The Accountants' Department occupies the centre of the triangular portion of the site and is top-lighted by a dome; while the areas which light the corridors and a few of the offices in the rectangular portion of the site are carried right down into the basement. The two main staircases are placed off the principal corridor across the site, but no attempt has been made to give them special importance or architectural character; they are good office staircases and nothing more. The first floor is well laid out and arranged, possessing much more architectural character than that of the selected design. The architectural character of the design is somewhat too elaborate, suggesting a municipal building rather than a block of offices. We think the design of the three terminal features marking the entrances somewhat unhappy, and the colonnaded fronts which form the treatment of the two faces of the triangular portion of the scheme seem to us to be of too elaborate a character for a scheme of the sort. However, this is a failing which has for a long time marked our national architecture, and it is in most cases impossible for competitors to feel they are on safe ground if they affect the simple dignity and reserve which were sufficient for our forefathers.



Metropolitan Water Board Offices.

Design by Mr. T. Edwin Cooper.



Metropolitan Water Board Offices: Plan showing proposed lay-out of Site.

By Mr. T. Edwin Cooper.

Messrs. Brown & Barrow have submitted an exceedingly fine scheme in plan, and, from many points of view, we think it is the strongest design sent in. The Accountants' Department is planned as a semicircular room, with its base towards the west. Round the curved outline is the public space which communicates at either end with the main entrance and on the opposite side with a secondary entrance and the axial line. On the axial line of the entrances ample stairways are arranged. The accountants' hall is lighted by a clerestory over a range of columns and also by domed lights over the public space. Secondary entrances are shown on each side of the apex of the triangle, and from these entrances short corridors give access to the public space of Accountants' Department.

Over the ground floor the whole internal space forms one courtyard; the Board-room is placed at the apex of the triangle, and the subsidiary stairs lead to public galleries at either end of the Board-room. The whole length of the west front above the second floor is left for future additions. Every part of the plan seems to be well and efficiently lighted, and the scheme is one showing much thought and imagination. The elevations are, however, a little uninteresting, though they are conceived on good and simple lines, but there are all the possibilities for good architectural expression in the lay-out and design of the plan.

Mr. T. Edwin Cooper's scheme is a very fine one in its general lay-out. The general lines of the plan are somewhat similar to those of Messrs. Hare & East's scheme, but the arrangement and planning of the staircases are more dignified and ample and the Accountants' Department better planned and lighted. The future extension is excellently arranged, and forms a block along the west front, which is omitted from top to bottom in the first scheme. This method of addition is far simpler and more

convenient than that adopted by most of the competitors, who have obtained a future extension by an additional story or stories over part of the area first built on. The elevations are refined and delicate, and are conceived in a neo-Grec manner, and the excellence of both the scheme and drawings can be judged by the reproductions which we publish in this issue.

Mr. E. T. Hall submits a scheme which is simple and direct. The hall in the Accountants' Department takes the form of a long and somewhat narrow room, 141 ft. by 45 ft. The arrangement of counter space is not altogether clear from the drawings. One of the main stairways is placed at the apex of the triangular arc and another in the centre of the west front, while the main staircase immediately faces the principal entrance. The elevational treatment is simple and appropriate.

The remaining design—that submitted by Messrs. H. O. Ellis & Clarke—differs from any of the others in the fact that the main entrance and staircase are arranged in the centre of the longer portion of the Rosebery-avenue front. The large accountants' office takes the form of an octagon, and the surrounding space is occupied by a double row of offices round the site, with a central corridor—an arrangement which, although not impossible for practical reasons of lighting and ventilation, would not be tolerated in any modern office building.

We have not attempted a detailed examination of the schemes sent in, and do not profess to be able to say whether all the requirements laid down in the conditions have been adhered to by competitors. With the exception of Messrs. Brown & Barrow's design, we illustrate in this issue what appear to us to be the three best designs submitted. As we have said, these four schemes we have specially mentioned all have merits and would form the basis of workable and convenient buildings. We are inclined to think that Mr. Cooper and Messrs. Brown & Barrow have submitted the two best plans, but these matters largely depend on the individual standpoint which governs the preference of an assessor for certain types of planning and design.

BRITISH ARCHITECTS IN PARIS.

Visit to Versailles.

THE members of the R.I.B.A. and the Architectural Association who had come over to attend the inauguration of the Exhibition of British Architecture and to be present as the guests of the Société des Architectes Diplômés at the thirty-third annual banquet of that Society (as described in the last issue of the *Builder*) took part, with a large number of members of the S.A.D.G., in a very pleasant excursion to Versailles on Saturday, May 16.

The party assembled at about 10.30 in the Cour d'Honneur of the Château, and were met by M. de Nolhac, the Curator, and M. Chaussemiche, the Architect to the Grand et Petit Trianons. M. de Nolhac, who very kindly acted as guide, philosopher, and friend during our visit to the Château, addressed a few words of welcome to the English architects, and said that the Exhibition, which had been opened the day before showed that English art maintained its high standard and reputation. Continuing, M. de Nolhac briefly outlined the history of the Château, reminding the visitors that, although the buildings, as now existing, belonged to the time of Louis XIV., yet the true founder of the Palace was Louis XIII., who about the year 1624 erected a residence, or Royal hunting-box, faced externally in brick with stone dressings in the manner of the period, some portions of which had been incorporated in the subsequent building. Louis XIV. did not commence those gigantic additions which resulted in the transformation of Versailles into a Royal residence and court until about 1668, when Louis Levau added two wings to the east of the original structure. Then, with the advent of J. H. Mansart in 1670, these wings were enlarged, the famous Galerie des Glaces was built, and the long south, and later the north, wings were carried out. The beautiful Chapel—one of the finest works of the period alike for its proportions and sculptured decorations—although planned by Mansart, was carried out by his successor, Robert de Cotte. M. de Nolhac mentioned that the private apartments constructed by Gabriel for Louis XV., not usually shown to visitors, would be open for our inspection. These proved to be quite untouched examples of the elegant style of the period, the delicate arabesques and scrolls being enriched with gilding on a uniform treatment of pale grey or white-painted panelling. The Cabinet de Toilette du Roi—a tiny room about 10 ft. square—in particular evoked our admiration for the extraordinary delicacy of the decoration in the panels, each of which symbolically represented one of the liberal arts or sciences.

Some time also was spent in the beautiful chapel, and, the visit of the Château being completed, the party adjourned for luncheon.

M. Gautier,
speaking on behalf of the President, welcomed the English visitors, and addressed a few words of thanks as Chairman of their Exhibition Committee to Messrs. Blomfield, Newton, Green, Horsley, and Cart de Lafontaine.

Mr. Blomfield,
in reply, said that he had very much pleasure in thanking the Société des Architectes Diplômés for all their kindness and hospitality.

M. Louvet,
speaking on behalf of the architects of Versailles, said it gave them great pleasure to welcome their French and British colleagues, and he hoped they had admired the beauties of Versailles and that they would be tempted to repeat their visit.

The Gardens, Orangery, and the two Trianons were subsequently visited under the guidance of the architect, M. Chaussemiche, and on their return the English architects were kindly entertained to tea by M. et Mme. G. Lisch.

Visit to the Salon.

On Sunday a visit was made to the Salon through the kindness of M. Thoumy, the General Secretary of the Société des Artistes Français. M. J. Mora, Secrétaire-General du Syndicat de la Presse Artistique, who acted as our guide, enabled us to see, by means of judicious selection, all the works of more than average merit, and was full of interesting information on the subject of the artists and their works.

On Monday, May 18, a visit to Fontainebleau was arranged, and a number of British and French architects visited the Palace under the guidance of its distinguished Curator, M. G. d'Esparbès, and M. Redon, the chief architect to the fabric. The gardens were subsequently visited, and later some of the party went for a drive in the forest, whilst the remainder returned to Paris, including several members who wished to have another opportunity of inspecting the Exhibition.

Visit of M. Raymond Poincaré to the Exhibition.

The President of the Republic, accompanied by Mme. Poincaré, made his promised official visit to the Franco-British Exhibition on Tuesday afternoon, May 19. M. et Mme. Poincaré were received by M. Paul Jacquier (Under-Secretary of State for Fine Arts) and numerous French architects, artists, and men of letters.

The R.I.B.A. and Architectural Association were represented by Messrs. Reginald Blomfield, R.A., P.R.I.B.A. (Chairman of the British Exhibition Committee), Ernest Newton, A.R.A., V.-P.R.I.B.A. (Vice-Chairman of the British Exhibition Committee), Curtis Green, Gerald C. Horsley, Cart de Lafontaine (Secretary-General of the British Exhibition Committee), J. A. Gotch, Hastwell Grayson, Alec Horsnell, Geoffry Lucas, Arthur Keen, Robert Atkinson, F. R. Farrow, F. R. Yerbury (Secretary A.A.), and several other British architects. The President made a complete tour of the Exhibition under the guidance of M. J. Hermant and Mr. Reginald Blomfield, immediately followed by Mme. Poincaré, who was escorted by M. Paul Jacquier.

The following members of the British delegation had the honour of being presented to the President:—Messrs. Ernest Newton, A.R.A., Curtis Green, Gerald C. Horsley, J. A. Gotch, P. Cart de Lafontaine, and M. E. Bourdon.

The President
expressed considerable interest in the exhibits and spent some time in the sections devoted to British and French students' work and in the Historical Section. Before leaving he congratulated the organisers of the Exhibition individually upon the success of their efforts.

From amongst the two hundred and fifty odd notices which have appeared in the Parisian Press on the subject of the recent Exhibition of British Architecture I select a few of those which are both instructive and interesting on account of their intelligent criticism and cordial appreciation:—

The *Figaro* of May 12 says that "artistic manifestations like those of the Exhibition in London last year and the present Exhibition at the Salles du Jeu de Paume are not only useful as a means by which the architects of both countries can show their appreciation of each other's work, but also form an occasion when they can exchange many useful ideas." The same paper, in a review signed by M. Arsène Alexandre, in the issue for May 16, under the heading of "L'Entente Cordiale des Architectes," says:—

"A walk in the environs of London or a visit to any town in England or Scotland is sufficient to make one admire the way they know, over there, how to build to satisfy the requirements of public and private life, whilst at the same time putting the smallest cottage or the greatest halls in double and complete harmony with the surroundings and with the national habits. Of this exceptional gift so many attractive examples will be found in the Exhibition of the Jeu du Paume that the most uninitiated will find pleasure and profit in a visit." The writer then mentions M. Hermant's dedication and Mr. Blomfield's Preface to the catalogue, and goes on to ask whether there is any sign of French influence in the work shown. "This is possible," he says. "Already English architects, as we see in their students' work, have drawn upon our methods and 'official style.' It would be an excellent thing if, on the other hand, our own architects could profit by their examples of logic, of simplicity, and of the remarkable adaptation of the buildings to the needs of the people and to their purpose. It goes without saying that the results of such a course can only be really good if the architects of both countries do not confine themselves to mere imitation, but take inspiration from the methods by which these results are achieved. But what one can admire without any restrictions is the art with which the British architects know how to show the appearance their creations will have when completed, and not by the ungracious plans and elevations of our own men. A house, a palace, or a whole town are here shown as one would see them, and that with a dexterity in their execution and a diversity for character which are remarkable. . . ."

La Liberté considers that the *clou* of the Exhibition is the "truly admirable" Historical Section. The modern work "offers many useful lessons."

Le Gaulois asks why the Société des Architectes Diplômés do not hold an annual exhibition of the work of French architects, and is of opinion that the present Exhibition shows that English architects are returning to a "tradition."

Le Temps is of opinion that a methodical and impartial examination of the exhibits results in an "impression which is rather unfavourable to English training and modern work," and considers that British architects are too prone to sacrifice logical and clear planning to their love of the picturesque. The writer regrets that English students should neglect the work of the predecessors (as shown in the Historical Section), and derive their inspiration from French architecture such as Versailles and Fontainebleau. "English architecture, however, possesses at least one form which is particularly its own, and which is charming—namely, the country house; architecture of faultless logic, derived from mediæval traditions, most ingeniously and, carefully adapted to modern needs, and, by the simplicity of its planning, its soberness, and good taste, well adapted to its purpose."

English gardens are then favourably compared with those executed by French architects, and English architects are advised to abandon a "blind following of architectural dogmas founded on Greek and Roman work," whilst Frenchmen can learn from the Exhibition the "sense of comfort" and taste in the setting forth of their designs.

H. P. L. CART DE LAFONTAINE.

INCORPORATED CHURCH BUILDING SOCIETY.

THE ninety-sixth annual meeting of this Society was held at the Church House, Westminster, on May 28, under the Chairmanship of the Dean of Westminster.

The Rev. T. T. Norgate read the annual Report, which showed that the income for the year had been £9,199 16s. 7d. During the year twenty-seven grants, amounting to £3,680, were made for additional churches; four grants, amounting to £380, for churches rebuilt; and sixty-three grants, amounting to £2,630, for churches enlarged, rearranged, etc. The past history of the Society showed that it had been instrumental in aiding in the erection of no less than 2,731 additional new churches, and in assisting in rebuilding, enlarging, or otherwise improving the accommodation in 6,893 other churches or consecrated chapels-of-ease. The actual amount of money entrusted to the Society and used in making grants towards the objects named had reached £950,456.

The Dean of Westminster said that the Society was one of the best of the old-established associations in connection with the work of the Church of England. In 1888 the Church was beginning to realise the demand being made upon it in consequence of the growing industrial areas of the kingdom, and they could now recognise the strenuous work the Society had done during its century of existence. From the middle of last century there was no feature of Church life which would leave a mark more enduring and conspicuous on the face of the land as the church building in Great Britain. The close of the fifteenth century was another great church-building era, and was the only one which could compare with the period between 1850 and 1910. It had been impossible for the Society to undertake large schemes such as those which were taken up in individual dioceses, as in the East-end of London, Portsmouth, and Plymouth, and there was a danger of these diocesan undertakings affecting the central fund. He hoped, however, the Diocesan Committees would recognise the work done by the Society in the past, and not overlook its claims. One great service the Society rendered was a kind of Court of Architectural Appeal. The clergy were quite capable of making mistakes with regard to architecture, but in the Society they had the sympathetic advice of great achitects, which was a great boon.

Mr. F. Pearson, F.R.I.B.A., in moving the adoption of the Report, said an examination of the Society's early records showed that the meeting that day was of unusual interest because it was actually the centenary of the beginning of the movement that resulted in the foundation of the Society a few years later. By the help of the Society and kindred organisations large numbers of churches were built. In London especially great efforts were made to overtake the neglect of a previous generation, and during the Episcopate of Bishop Blomfield some 200 churches were erected in the diocese. Unfortunately, evangelical enthusiasm was in advance of architectural knowledge. Gothic architecture was the fashion; and what Gothic it was! Plaster pillars and mouldings meagre in construction, contemptible in their fittings—the biggest show at the least cost—many of these buildings still remained a warning for future generations. Happily, better things were in store. The influence of the Oxford movement, and of writers like Pugin and Ruskin, made itself felt in the region of Architecture, and a new generation of architects arose, with great artistic gifts and high ideals, whose creations remained one of the chief glories of the nineteenth century. But the Oxford movement and the Gothic revival were no longer the forces they were. The objects for the attainment of which they strove had been largely realised. They must seek elsewhere the moving impulse of the present century. There was little doubt that both in Church and State it would be in the direction of internal organisation. At the present moment one of the most obvious signs of this spirit was to be found in the demand for the subdivision of the old dioceses with their huge areas and populations, and their reductions to such proportion as could satisfactorily be overseen by one individual. There were various other directions, too, in which this characteristic of the time was making itself felt. But, admirable though it might be, it was well to remember that in their endeavour to attain the practical they must be careful not to lose sight of the ideal. Their Society had nothing to do with the building of cathedrals, but, in passing, he ventured to express a hope that new dioceses would aim at something more ambitious than parish churches for their cathedrals. But with regard to the building of new parish churches, which it was a chief aim of the Society to encourage, this work was becoming more and more the care of central authorities and less the result of private enterprise. Now the central authority aimed at economy, and while it was easy to sympathise with the very natural desire to make money go as far as possible by limiting the amount to be spent on each building, it would surely be a fatal mistake to lose sight of the high ideals which were the legacy of the last generation. For "where there is no vision the people perish." Even in mediæval days large towns were split up into numerous parishes with small inexpensive churches, as might be seen to this day. But alongside of these, or rather in their centre, was the cathedral or the great monastic or municipal church, its stately form dominating the city and leading men's minds out of and above the common rut of daily life. He would urge, then, that a diocese in drawing up its scheme for church-building should provide that at convenient centres (one, at least, in every rural deanery) there should be one church on the grand scale, which, in addition to forming the ecclesiastical centre of the district, should be not only to those that build, but to succeeding generations, a witness and an inspiration. When he spoke of churches on a grand scale he must not be understood to mean costly buildings with much carving and a wealth of detail. Though, when funds admitted, such enrichments might be desirable, it was to dignified and lofty proportion, ample floor area and general breadth of design that they must look for the church that would "bring men to their knees." He well remembered some years ago going into Westminster Cathedral before its completion, while some scaffolding was still standing. There were no fittings, no decorative features anywhere—the absence of detail was remarkable. All was bare brick. But one could not fail to be made immediately sensible of its great solemnity and fitness for high uses. It had been his privilege in recent years to be associated professionally in certain alterations and additions to the Cathedral of Perth The church was built by the late Mr. Butterfield somewhat early in the career of that remarkable artist, and at a time when the Church in Scotland would have experienced even greater difficulty in raising money for church-building than it does at the present time. Here there was clearly little money to spend, so detail was sacrificed to lofty and dignified proportions, which gave a distinction to the interior and which could not fail to impress the worshipper. He was not, of course, asking that every parish should contemplate the erection of a church on the cathedral scale, but only used these examples to emphasise the all-important fact that it was dignity, harmony, and sincerity that went to make a fine building. These qualities were independent of style and period, as they were of richness and ornament. They might be found in the great cathedral and equally in the simple village church.

The Archdeacon of St. Albans, in seconding the motion, remarked that architects as well as parsons sometimes made mistakes. It had been said that, however wise one man might be, yet six men at a table were wiser than any one man at a table. They had a number of wise men in the Society—architects who generously gave their guidance to the movement.

The motion was carried.

Mr. Athelstan Riley moved:—

"That it is desirable that a vigorous effort be made to secure increased support for the Society, so as to enable it to meet the very pressing claims which are continually being brought before it, and which arise not only from the need of supplying adequate church accommodation for the rapidly-growing population in large towns, but also from the gradual decay into which the more ancient and interesting churches of the country are continually falling." He referred to the great service done by the Society as a supervising body, and said that when plans were approved by the Committee it could be certain they would have a church which did not offend against the canons of good taste, and a building which was structurally sound. People chose architects for all kinds of reasons, and it was of the highest importance that there should be a central society capable of exercising some sort of supervision. That referred not only to churches being built at the present time, but to restorations of old buildings. No one, as he walked about, could help regretting much what had been done in the way of restoration. Church architecture was not standing still, but was slowly but surely changing. In the first place there were new building materials coming into use. He did not want to shock his conservative friends by talking about reinforced concrete, but that was developing in small buildings, such as the erection of mission-halls. There was also the question of style, and those of them who had eyes to look and minds to reflect could not help coming to the conclusion that the ecclesiastical architecture on which they had been brought up was slowly passing away. Not so many years ago no one could conceive of a church in anything but the Gothic style, but the Gothic revival was practically dead in the case of secular buildings, and one could not resist the conclusion that a change was coming over ecclesiastical buildings. It seemed to him practically certain that some form of classical architecture, whether it be on the lines of Byzantine or some form of the Renaissance, was inevitable, at any rate, for city churches. If that be the case it was very essential to have a Society like that to advise and restrain and direct. They were indeed fortunate in having connected with them a body of architects not only exponents of their own particular styles, but capable of taking a broad view of the whole facts of ecclesiastical architecture.

Sir Edwin Grant-Burls seconded the motion, and observed that the clergy of the eleventh and twelfth centuries were their own architects, and designed buildings which no modern architect could improve upon.

The motion was carried.

THE CONCRETE INSTITUTE.

PROFESSOR HENRY ADAMS (President) took the chair at the Connaught Rooms on May 28 on the occasion of the fourth annual dinner of the Concrete Institute. There were also present amongst others:—

Mr. E. J. Allen
Mr. John G. Ambrose
Mr. H. H. D. Anderson
Mr. H. Woodward Aston
Mr. H. K. G. Bamber, F.C.S.
Mr. Walter J. B. Barker
Mr. W. R. Barlow
Mr. Maurice Béhar
Mr. Percy J. Black
Mr. George B. Blyth
Mr. Horace L. P. Boot, President Institution of Municipal Engineers
Mr. F. Bradford
Mr. W. C. Bramham
Mr. Alfred Brooks
Mr. A. Stewart Buckle
Mr. C. McArthur Butler, Secretary Society of Architects
Mr. D. B. Butler
Mr. J. F. Butler
Mr. S. Bylander
Mr. Thomas J. Carless, President Quantity Surveyors' Association
Mr. Percival Chubb
Mr. F. D. Clapham
Mr. M. W. Clark
Mr. H. Clough
The Hon. Sir John A. Cockburn, K.C.M.G.
Mr. W. Cyril Cocking
Mr. A. W.S. Cross, M.A.
Mr. H. Kempton Dyson, Secretary
Mr. R. E. Eilcart
Mr. E. Fiander Etchells
Mr. J. Ernest Franck
Mr. C. H. Gage
Mr. G. H. Gascoigne
Mr. H. R. Goodrham
Mr. H. J. Grace
Mr. Allan Graham
Mr. W. Curtis Green, President Architectural Association
Mr. L. Griggs
Mr. Osborn C. Hills
Mr. Harold Holloway
Mr. B. van Homan
Mr. George Hubbard
Mr. W. R. Jaggard
Mr. R. Johnson
Mr. L. Lister Kaye
Mr. H. M. Kelk
Mr. W. H. Lascelles
Mr. W. J. Leahy
Mr. P. W. Leslie
Mr. G. J. McHaffie
Mr. Ellis Marsland, President District Surveyors' Association
Mr. D. Mason
Mr. John Murray
Mr. W. S. Napier
Mr. Stanley V. Nicholson
Mr. J. Coulson Nicol
Mr. F. W. Pearce
Mr. W. G. Perkins
Mr. J. F. Plaister
Mr. S. R. Potter
Mr. F. W. Rice, President Institute of Builders
Mr. Leslie S. Robertson, M.Inst.C.E.
Mr. S. G. Robinson
Mr. Alexander Ross
Mr. Arthur R. Sage
Mr. Percy W. Sankey
Mr. A. Alban H. Scott
Mr. H. D. Searles-Wood
Mr. C. W. Sharrock
Mr. Frederick Shingleton
Mr. E. Simpson
Mr. R. N. Sinclair
Mr. B. J. Skidmore
Mr. J. Osborne Smith
Mr. J. B. Travers Solly
Mr. Alfred Stevens
Mr. Percy M. Stewart
Sir Henry Tanner, C.B.
Mr. B. Taylor
Mr. John M. Theobald
Mr. Thomas P. Tinsley
Mr. John Todd
Mr. F. W. Troup
Mr. T. A. Watson
Mr. E. P. Wells, J.P.
Mr. J. A. White
Mr. G. C. Workman
Mr. M. E. Yeatman
Mr. Percy L. Young

Mr. Ellis Marsland, in proposing "The Concrete Institute," said he had watched the Institute since its inception in 1908, and he congratulated the Council on the membership, on the objects of the Association, and on account of the work which had been done. After six years he understood the membership exceeded a thousand. In the early days of reinforced

concrete construction one was left to the tender mercies of various patentees and rival firms who magnified their own systems to the disadvantage of the systems of their rivals. But the Institute had changed all that, and had evolved order out of chaos, and had standardised and regulated the whole system of construction so as to make it practical and workable. It had also taken a large part in perfecting the by-laws in London in regard to reinforced concrete construction, and although these by-laws were not yet promulgated he believed when they were passed they would form the leading set of by-laws for the whole of the country. Many valuable papers had been discussed, and at present the Institute was inquiring into the failures which occasionally occurred in reinforced concrete structures with the object of ascertaining the causes. He did not mean to say there were more failures with regard to this form of construction than others, and indeed, in his opinion, there were far less; but still, the public wanted reassuring on the point, and it was the duty of those interested to go into the question and ascertain the causes of failure with the idea of bringing about a remedy. Another thing which was being done was to enlarge the scope of the Institute by including steel-frame construction.

The President, in reply, said that the Institute, by means of its committees, had already done a considerable amount of useful and practical work. It came in on the floodtide, and its immediate success was almost phenomenal. Then there was the ebb, and it was found that in concrete alone there was not sufficient scope. The Council came to the conclusion that some development was wanted, and decided to admit papers on structural steel work, where no concrete was employed or was only employed in a secondary manner. The result was that the interest in the meetings revived. In view of this the Council decided that an amplification of the title was desirable, and they had added the words, "an Institute for structural engineers, architects, etc." This had not given universal satisfaction, and some of the makers, chemists, and contractors felt that they were being left in the cold. One of the great advantages of the Institute, however, was that all those gentlemen could meet together with the engineers and architects. They knew a great deal about concrete, but there was a great deal more to learn, and to make progress it was necessary that all the varied interests should combine together in one harmonious whole. Structural engineering was the one term which best expressed the variety of work of which the Institute took cognisance, but that did not mean structural steelwork alone. It included all kinds of buildings in all materials where stability was the chief aim. It excluded architecture, town planning, railway and tramway work, sewerage work, water-works, and mechanical engineering of all kinds. It appeared to him there was scope at the present time in all large buildings for the collaboration of the architect and constructional engineer. The architect had a considerable amount of work in considering planning and ornamentation of the building, and he might be to some extent relieved by the engineer of responsibility for the stability. Broadly speaking, the architect should be an artist, or, to put it another way, the architect was generally an artist. The constructional engineer should be a scientific man and mathematician, and that would indicate roughly the nature of the work he should undertake. If, however, the architect was a constructional engineer he would combine both duties, but it was not given to every man to combine these two branches of work. Then they had the burning question of the position of the so-called specialist. Why this term should be appropriated by contractors' experts he failed to see, for any man was a specialist who devoted himself to a special class of work and made himself acquainted with all that was known about it. Specialist firms were simply experts. Their experts were constructional engineers of the highest class, and he considered them as the mainstay of the Concrete Institute. He did not look upon them as tradesmen, although he had been told they were tradesmen because they were engaged by contracting firms. For some time past the Council had been working at a scheme of examinations, and he trusted in the autumn this would be in full working order. At present the examinations would be purely voluntary. He trusted that the success of the Institute in the past was only a foretaste of the greater success to come in the future. They had a secretary who was not only a good business man but was an expert in reinforced concrete, and his assistance to the Committees had been of great value. In conclusion the President said the Institute would welcome suggestions from any source which would tend to put it on a firmer basis and make it more useful to the members generally.

Mr. H. D. Searles-Wood submitted the toast of the "Visitors." He said that the presence of the representatives of the older learned societies showed that they were in amity and concord with the Concrete Institute.

Sir John Cockburn replied, and remarked that he noticed in the architecture and art of the ages that what at one time was brought into being as an inevitable element of construction afterwards, when it was no longer necessary, became a feature of ornament. The buttresses of the old cathedrals were necessary to counteract the thrust of the vaulted roofs, but they were still continued in chapels where there was nothing but a galvanised iron roof. So the origin of art was generally found in utility, and this should make for co-operation between architect and engineer.

Mr. E. Fiander Etchells proposed the health of the chairman in a humorous speech, and it was cordially honoured.

REINFORCED CONCRETE.*

THERE is no necessity at the present day to explain what reinforced concrete is. It has been most successfully boomed, but, unlike many things which have been boomed, it has justified its use, and time has shown that it is more universally applicable than was at first supposed.

The use alone of the component parts of reinforced concrete is very ancient history, but it was not until recently that their combination was employed deliberately for the purpose of curing economically their individual defects.

Plain concrete is a most excellent material in many ways, and ideal, for instance, for such structures as engine foundations, where weight is essential, but it has a serious deficiency in its inability to resist anything but the lowest tensile stress. Also such tensile strength as it has is easily destroyed by vibration.

By the employment of steel to take the tensile stress we get a fabric at the same time low in cost and applicable to structures, in which plain concrete would not have been used.

How varied are its uses you will find by looking over the advertisements of any periodical dealing with reinforced concrete. There you will find it is employed in almost any type of structure—even boats, incinerators, and tombstones. But one must not take advertisements too seriously. I speak from personal experience. Many things to which it is applied are, I presume, by way of experiment, and one must recognise that by experiment to a very great extent the boundaries of its uses may be extended. But it is unfortunate that experimental uses should be put on the market and advertised as the soundest methods of construction for certain needs. By allowing their enthusiasm to run away with clear judgment, certain advertisers have advocated the building of classes of structures which have proved failures, and have done reinforced concrete decided harm. Whatever it may be used for in the future, at the present state of knowledge of design it has limitations, and is not a universal salve for all structural ailments. It has often been advocated for things which proved unsuitable, uneconomical, and faddish.

One must not forget, of course, that applications which appeared wrong a number of years ago have, as a result of experiment, consequent better design, and improved methods of working, now been accepted as right, and are established.

I think there is too much talk about "systems." It makes for confusion in the mind of one who does not understand the principles underlying all designs. There are a great many who claim a new system and take out a patent by virtue of cranking a bar in some new place; but perhaps this is only natural in the rush to sell at the beginning of the demand.

Unfortunately, the older civil engineers were disinclined to take up seriously a method of construction apparently, possibly because for the purpose of design Molesworth was useless. But as reinforced concrete was a fabric of undoubted value, a new branch of the profession was of necessity created.

Designs got into hands of specialists, and, as the younger engineers were at first as shy of the new fabric as their elders, staffs were not transferable, and the specialists had to call on the University men as their assistants. Thus were the numbers in an already over-stocked profession increased. Work in this country for the engineer was becoming less plentiful, and younger members had visions of being exiled abroad, stranded in all probability in some lonely quarter without another European resident.

This was not pleasant, I know. I was one of the visionaries. We became less dignified, and considered reinforced concrete not such a bad thing after all. It was worth considering as an alternative to exile. A more cheerful vision formed before the eyes of younger members of the declining profession; they became enthusiastic, and a rush took place for patents, and engineers again hoped to make a fortune. Commercial gentlemen joined in the rush. It was they who became expert in talking of engineering matters.

I recall the case of a gentleman being ushered into my room as the credited agent of a well-known firm who have a "system." He was unaware that I was an engineer, and hoped to impress by a continuous strain of talk and an unending variety of photographs. When I managed to get in a question or two and a few contradictions, he looked at me, sized up the situation, and became brutally frank. "Look here," he said, "I know nothing about this subject. I travelled for cigars before. I wish you would give me a few tips." He had been recently appointed, and he asked me to give him a few of the questions he was likely to be asked and what the answers would be.

There is nothing wrong in this type of traveller, only their principals should not make the mistake of advertising them as engineers. This does illimitable harm to the principal in the long run, and, what is worse, reacts on the use of reinforced concrete.

But to get back to the rush for patents and its result. Some of the systems are indicative of hasty consideration, and are beginning to assume different form now when considered in cool and sober sense. However, the old patent is there, and allows one to talk of an exclusive system. The fact of having a patent also, I find, impresses a certain class of individual.

I cannot but think also that not a few specialists make a difference in the placing and the cranking of bars and the form of stirrups, deliberately for the purpose of being able to talk about a "system." I believe that gradually so-called systems will disappear, and work will be carried out to the designs of engineers as it was before the days of reinforced concrete.

Before this comes about, however, I am afraid we will have to listen to the advantages of the various systems from their biassed advocates for many years. In listening to them, I would advise you never to allow yourself to be impressed at the time, but to consider everything coolly and alone next day. I find this a most excellent principle to follow. If there is something you are not quite clear about ask the representative to call again. He will run to you. Generally speaking, you will be on safe ground if you clear him out as soon as he has answered your queries.

In starting to consider any of their designs remember that it does not matter what the particular system is or whether it has a name in hieroglyphics; there is nothing mysterious about it except possibly the special advantages claimed.

The same principles underlie, or should underlie, all designs. Indeed, the most difficult problem is one which engineers and architects have studied, and without the use of a book on reinforced concrete, namely, the determination of the stresses in a member of a structure. When comparing various designs for the same structure one finds, as in dealing with any other structural material, that there is every possible degree of goodness or badness, and in this lies the most of the difference between the various systems as carried out.

The various so-called systems are legion. I have not time to explain their individual advantages or discuss the claims that are made for them, or even describe their particular fads. Some I dare not describe, as I would be apt to confuse them. Nor would I recommend that you should or should not adopt Hennebique system because of the smithed ends to their bars or because of their type of stirrups; or Considere, for their spirals and hooks; Coignet,

* A lecture on "Reinforced Concrete in Theory and Practice," given by Mr. Alexander Melville, C.E., at the Northern Polytechnic Institute.

for their method of dealing with shear; or Kahn and the Indented Bar Company, because their bars are something original and expensive. Nor will I condemn or praise those who employ a particular form of mesh, such as Clinton, Johnstone wire lattice, or triangle mesh. There is nothing wrong with any well-known system, because there is nothing wrong fundamentally with the combination of steel and concrete. However, you have only to listen to the representatives of the various systems to find out that there is something to be said for every one, even those that could never be put into practice. There are uses for them all. Even the system which claims to reinforce metal may be used with complete safety if one has plenty of money to spend.

I know a builder who undertook to erect a small single-story building in reinforced concrete without the help of a specialist. When the walls were half up he proudly asked me to inspect his work. To my astonishment, I found an extraordinary disposition of bars appearing out of the concrete. They were twisted in all fashions and braised at junctions without any apparent reason.

Gradually I understood, and could not restrain my laughter, but I did not offend the builder. "Yes," he said, "so far the walls are built entirely with ends and other scraps of bedsteads." I may say he disdained patenting his system, and yet that building has been standing for a number of years. I do not know that I could unreservedly recommend this bedstead system, but yet it has its use, and it must have been a very economical design.

What one ought to do in comparing competition designs is never to think of a system at all, but look for good design, and remember that all designs we look at are, or ought to be, based on the same fundamental principles.

Another thing one should do is to find the amount of steel and concrete employed by each designer, and if you find one which is considerably different, look into his design most carefully, for it stands to reason that in well-designed work, if the same loading and factor of safety be taken, there can be very little variation in the quantities of these materials. It is advisable, also, to see that the quantities given are approximately those that go into the work of the successful tenderer.

There is a type of construction which I find some are apt to place under the heading of reinforced concrete, but a little consideration would show it is something quite different. I refer to the fireproofing of steel structures by encasing in concrete or fireclay blocks and slabs. These blocks and slabs are not intended to be stressed, but are used merely as a protection of steelwork against damage by fire.

I pointed out earlier, that structures had been erected in reinforced concrete which were not suitable for its use in the present state of knowledge. I would like to name now a few structures to which it is admirably adapted if well designed and well constructed.

First of all, a word as to its advantages. It forms a monolithic structure, and thus makes a much sounder building than the old disjointed method of building steelwork loosely into stone or brickwork. It is fireproof in varying degrees, depending on the aggregate used in the concrete and the cover of the steel. It is economical both in first cost and in maintenance. In such structures where steelwork is exposed the cost of frequent painting is saved.

If properly imbedded in the concrete, the steel will not corrode under water. A consideration on expensive sites, also, is the possible saving of room in the thickness of the walls.

For bridge work, reinforced concrete is admirably adapted. It is economical, particularly in upkeep. In a few cases but that of a high viaduct over a river, with much traffic, is the erection expensive.

Again, I think it is much more capable of architectural treatment than a steel structure. It is a highly suitable material for piles and for jetties generally. There is no corrosion of the steel and no rotting, as in timber. Toredos find it indigestible. It is also highly suitable for retaining walls and for tanks, in both cases being economical and saving considerable room compared with stonework. In tanks, also, there is not the maintenance that is chargeable to steel. It is being used with increasing frequency and is thoroughly satisfactory for such structures as silos.

In floors, columns, and girders, in factory and public buildings, it is also employed satisfactorily, but I do not know that it is to be recommended for walls in the majority of buildings. Walls can be made thoroughly sound and very much thinner than is the case with the older methods, but I am afraid that the architect with a reputation for a good elevation (and this is the only part of a building that later generations consider) will wish something more than strength. For factory walls it is all right if there is no intention of future extension. But if there is, and openings for doors, etc., are to be cut or the face of the building taken down for the purpose of joining, I am afraid one would be faced with a tricky problem. It would be almost necessary, also, to employ the same experts for the extension, as an accurate knowledge of the position of the reinforcement and the original method of design would be essential for safe working. It would also be necessary to employ him so that responsibility for any damage to the old building could be fixed.

We will find the most popular type of public building in the future will be a reinforced concrete framed structure, with reinforced concrete floors and stone or brick thin walls.

For raft foundation work, reinforced concrete is invaluable, even although it is impossible to do more than guess the external forces acting on it. (Competitive designs for a raft would be excellent in indicating who are our bold engineers and who are our timid.)

When an architect has a structure in reinforced concrete to carry out, he employs, either through choice or competition, a specialist, and says, "Look here, your representative is the most superb talker I have come across. I want you to design some work for me." They look pleased, and give him quantities and drawings, which he submits to all contractors in sundry, or a few of impeachable character, and the contract is fixed as the result of a competition in price only.

In the second case he deals immediately with the contractors, and the contractors send the inquiry to their pet specialist or to the specialist to whom they have tied themselves under money penalty. In this case the contract is fixed as the result of a competition in price and design. But in this case design is merely a question of quantities, as no specialist does, or has time to, make complete drawings for the job in the short time at his disposal before it is tendered for.

Thus it looks as if the first method would assure the best job being made. There is, however, another point to consider. By dealing with the contractor you have only one man to deal with, but by adapting the first method you are at one corner of a triangle, and if anything goes wrong with the work, you rather wish you were at the end of a straight line leading direct to one on whom you could fix responsibility.

This, however, is not a point to be much afraid of if one is careful to select a thoroughly capable firm of specialists to design the work, and, what is quite as important, to allow only those contractors to tender whose workmanship is beyond suspicion, and who have a thorough understanding of the importance of keeping strictly to the working drawings, although they may show in certain places very awkward pieces of construction.

Do not, on any account, allow plasterers or others whose knowledge of concrete work is based on the putting in of concrete foundations specified at six to one, executed at ten to one. If it is their first tender for reinforced concrete work their prices will be alluringly low, and if there is a good clerk of works on the contract they will have to be a firm of substantial standing to withstand the monetary loss. Another very important factor is the employment of a thoroughly good clerk of works; not an habitual growler, or one who spends all his time making test cubes, but a man who really understands the class of work. A good clerk of works is a blessing to a job and to the contractor. He will not keep work back, but will do his best to help a contractor to get ahead quickly. He will be decided as to his reading of the specification, and he will stand no attempt at scamping or inferior workmanship. His advice will be given freely as to the scheme of operations, and it is often invaluable, as he has had experience of the methods of work of various contractors, and is in a position, if he be an intelligent man, to compare them and see clearly what are the best.

A good contractor, having secured a contract, studies the plans thoroughly to consider how he can do the work most expeditiously and economically.

The first point he must decide is the lay-out of the job—where his plant is to be placed, whether his steel is to be assembled on the job or in his yard, whether to use hoists, cranes, or a movable mixer and spout.

His next consideration will be the arranging of a staff. This, of course, will depend on the nature and size of the work. If the job is of considerable size he will have a resident manager, directly responsible to his office for the carrying out of the work.

Directly in touch with the manager will be those in charge of the various departments of the work—carpenter foreman, steelwork foreman, concretor foreman, excavator foreman, timekeeper, and book-keeper. In touch with these head foremen will be sub-foremen, or gangers, over each squad.

Having settled his staff, the question arises how the work is to be carried out—every part to be tackled at once or in sections, and which section first—with a view to continuous employment of a full staff of men throughout. This is often one of the most difficult parts to manage.

Take the case of a building of two wings and a cross building—a U on plan. A good method to adopt in this case would be to make a start on one wing first, and then put the joiners on to the other while the steel is being laid and concreted in at the first wing. It would not be difficult, if this method of working the various trades on alternate wings can be carried out, to carry on the work at full bore throughout. This is, of course, a simple case; others I have come across are very difficult to plan.

If work is carried on in a spasmodic fashion, as in the instance already taken, if both wings were carried on simultaneously with the same trade, a contractor will never make a satisfactory job. He would continually be taking on complete gangs, and would thus find it difficult to get a good set of men. Work would be slow, and, being carried out by casual labour, not of first-class order.

Having made all preliminary arrangements, the contractor must consider the method of timbering to be employed. If he is wise, he will send a typical drawing to the job, showing generally how the foreman is to plan his work. This typical drawing is usually sufficient, and an efficient foreman will adopt the method shown to all details of the work.

In fixing on a method, the two main points for consideration are "ease in striking and adaptibility to alteration." Such a thing as a wall form need only be considered from a point of view of ease in handling and strength for continual re-use.

But in the case of column casings, one must consider as well as the foregoing, adaptibility to alteration. The columns on the second story of a building are invariably of smaller cross sectional area than those immediately below them, so that if the casings are to be used over again they must be built with a view to saving as much labour as possible in alteration.

We find the same problem in beams and in floor slabs due to alteration in beams, but not to the same extent as we come across in columns.

When a floor is concreted the order in striking is columns, beam sides and floor slabs, the underside of beams being left until long after the rest has been cleaned away.

This is the order that must be considered when one is planning the timbering, unless he is prepared to use the job as a timber store. When a floor is struck for the purpose of using the timber above there are no struts left but those under the beams. It is therefore inadvisable when timbering for the next floor to place struts anywhere but above the beams, the concrete in the floor slab being too green to take much load. Thus it becomes advisable to support all the timbering on struts above the beams, and this is the method of support almost universally employed. As a rule, a cross-head is placed on the top of the strut, and on this the beam side forms rest. Among the side of the forms a runner is fastened, and on this runner rests the joists for the floor slabs. It is thus possible to strike everything else without disturbing the struts and timbering of the underside of the beams. Unless great care is taken, considerable damage is done to the timbering—particularly that for the floor slabs—when striking.

A method sometimes employed in America, but which I have never seen here, is to use a double-horse for lowering forms. This consists of a light movable framework not unlike an inverted four-legged table. These legs reach close to the ceiling, and between each end pair is stretched a rope into which the timbering is placed. The ropes run through pulleys, and

are then passed down, and the forms are lowered with motherly care.

I have found quite a successful method is to make our struts built, composed of No. 2, 6 in. by 2½ in., with 2½-in. distance pieces every 4 ft. or so apart. When striking, a handy scaffold can be formed by placing runners through the struts, supporting adjoining beams and resting on the distance pieces. On planks placed in these runners the men striking can work and hand the forms down carefully.

Timbering is a very heavy item in reinforced concrete work and one which is a considerable drain on a contractor's resources, as it has to be used over and over until it is scrap before he gets a full return for his expenditure. When their accounts are due, timber merchants will not be put off the way contractors are by quantity surveyors. A contractor naturally tries to save as much in his timbering as possible. Some try to save by using material of small scantling, but this is false economy. There is relatively more value to be got out of material of stouter section, particularly with boards A standard thickness for these should be 1½ in.; anything less is liable to much damage in striking. Beam bottoms particularly should be 2 in.

A contractor has also to consider handling steelwork in the most efficient and least costly way. Let us hope, for the sake of his finances, that he has not estimated on the figure specialists inform us the labour cost is. For ease in working the steel should be laid out in separate stacks of the various scantlings, and, where possible, in separate stacks of the various lengths as well. The workers can then find any bar that is required immediately. This takes some labour on the arrival of material, but it pays.

Before it is placed on the forms, all the steel has to be bent to some shape or form, and this is most conveniently executed without the use of any power-driven machine. There are many useful hand machines on the market, such as the "Kennedy," but all I have come across are slow when dealing with large sections. For bars of 1 in. diameter and down they are handy and make a good job. Above that they are usually worked by means of a ratchet, which is slow work; or, if not, the strain is such that some part is apt to give way. A stoppage is an expensive matter, and one cannot always keep a complete stock of spare parts. I find the simplest and most effective method of dealing with all sizes except the highest is by employing tubes with strong ferrules at the ends. One merely slips the tubes over the rods so that the end coincides with the position of the bend, and pulls the other end round to the required angle. Those tubes are of varying lengths and strength, depending on the diameter of the bars to be bent, but a handy length for bars up to 1½ in. diameter is 6 ft. They are not expensive, and a stock can be kept. Their fault is that they tend to burst at the ends, so it is wise to have long strong ferrules, screwed or shrunk on. For bending stirrups a small tube 18 in. long may be used, as already described, or, what is probably the most handy, a steel claw. This claw is like a two-pronged fork, the prongs being shaped on side view like a mark of interrogation.

When the steel is bent and the stirrups made, say, for a beam, the various parts have now to be assembled. This is best done on trestles so that men may work all round it with ease. The beam being built, it is placed in position on the shuttering already prepared for its reception. It is necessary to keep the steel from resting on the boards when concreting, and a convenient method of doing this is placing little wedge-shaped pieces of concrete on the forms to begin with, and then resting the steel on these. These blocks are made of rich concrete in moulds and in lengths corresponding to the widths of the beams in which they are to be placed. In section they are about ¾ in. deep, and varying in width from 1½ at the top to 1 in. at the bottom. Being of concrete, they are not removed, but are concreted in, and, being wedge-shaped in section, there is no fear of them falling out on removal of the centring. When the steel is all placed in position the next process is concreting.

The mixing of the concrete should be by a mechanical mixer of the batch type, which gives the most satisfactory results. From a contractor's point of view also it is the most economical, and allows of much more speed in working than mixing by hand. From the mixer the concrete must be conveyed rapidly to where it is to be deposited, and this may be done by barrows and hoists, cranes and skips, or lifting buckets direct from the mixer, depositing into a bin at the level required or into the funnel of a spout. The mixer may be stationary or movable. Each method has its merits depending on the nature of the particular job, the main thing being to deposit it rapidly and without dropping from a height.

The concrete must be well tamped in position and carefully worked round the rods so that it will adhere everywhere. Most tampers in the market, I find, are just too heavy for general work, and tend to tire the men and induce them to scamp the tamping whenever they are not watched. It is quite possible to make a good job with a light tamper if used well, as with a heavy one. For beams I find the best type of tamper to be a ½-in. rod bent at about 2 in. from the bottom at right angles and slightly feathered. With this the concrete can be well worked round stirrups and rods. To make a good face on walls of beam sides there is nothing better than a shovel worked up and down against the shuttering. For floor slabs a ½-in. plate, 6 in. by 6 in., riveted to the end of a handle answers well. Another good method is to use a wooden roller, which has this advantage—that it is not so apt to jar the work by causing vibration in the forms.

When filling columns and walls it is desirable to hammer the form with wooden mallets. This aids in giving a dense concrete and helps to make a smooth finish. In concreting floor slabs and beams it is well to start at the farthest point from the hoist when it is being deposited from barrows, so that no wheeling will be done over green concrete. It is advisable also to have an experienced man stationed underneath to watch for any deflections, so that work can be stopped at once and extra staying or wedging executed before initial set takes place.

In few jobs is it possible to finish a floor throughout in one day, so the question arises how and where to make a stop. These should be made as near as possible to the centre of the span, and the stop should be made vertical against a board placed on edge for the purpose. When starting next day this joint must be thoroughly wetted and brushed before depositing fresh concrete, and in some cases coated with a rich mortar, or, if necessary, the face roughened.

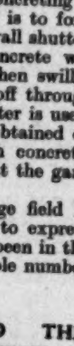
Before depositing any concrete the forms should be well watered, and, of course, it is necessary also on deposited concrete, for about a week after laying. It makes a sounder concrete and prevents cracks due to quick drying.

Where a floor is finished, and joiners have erected the cases for the columns above, and more so when columns and walls have been concreted and joiners start to lay the boarding for the floors, shavings and sawdust accumulate on the top of the concrete of columns and walls. No temporary handy covering I know of will keep the concrete free from this. The best method to get rid of it before concreting is started, and it must be got rid of, is to form traps in the column cases and the wall shuttering at the level at which the concrete was stopped. The concrete surface is then swilled with water, and the shavings float off through the traps or doors. If plenty of water is used, a thoroughly clean surface can be obtained on which to start depositing the fresh concrete. It is, of course, advisable to see that the gang is not too quick.

I have now covered a fairly large field in reinforced concrete work, and tried to express how it strikes a contractor who has been in the midst of its troubles for a considerable number of years.

BEAUTIFUL LONDON AND THE DESTRUCTION OF MONUMENTS.

THE accompanying sketch was received from Professor Lethaby too late for publication with his letter last week. To quote from the letter, he says, "The column might have bands of significant sculpture placed around the shaft at various heights and the capital might be gilt."



We quite agree with Professor Lethaby's condemnation of the project to do away with the Nelson Column. It may not be the form of monument we should have chosen, but it is far from being a monstrosity or spoiling the effect of the Square, and it is a commemoration of a great victory erected after that victory, and as such has an historic significance that no new monument, however perfect in design and magnificent in conception, could have.

GOODS TRANSPORT.*

THE annual cost of inland goods transport in the United Kingdom by road, rail, river, and canal amounts to at least £300,000,000, as stated in a lecture delivered to the Glasgow Chamber of Commerce last December. If any considerable economy can be shown to be possible in this vast annual outlay of nearly £1,000,000 per working day throughout the year, such an economy must be of the highest national importance. The question is, of course, of world-wide interest, as what applies to the United Kingdom applies, in varying degrees, to every other country, but the scope of the present paper is to deal with the aspects of the problem as it affects this country. In the locomotive we possess a machine which is capable of hauling heavy loads at a high speed and at a very low cost.

In a lecture recently delivered to the Leeds Chamber of Commerce it was shown that under normal conditions the inclusive locomotive cost of hauling a ton of goods a distance of fifty-six miles is one penny. That is to say, that, granting such conditions, the total locomotive cost (including wages, coal, oil, water, repairs, and maintenance) of hauling a ton of goods from London to York would amount to the sum of 4d. This is what the locomotive can do for us, and this is what it actually does for us, week in and week out, wherever and whenever conditions permit. But when we turn to enquire the total charge for conveying 1 ton of woollen goods, say, from the premises of a consigner in London to the premises of a consignee in York, we find that total charge, including cartage at both ends, may be as much as £2 17s. 3d. Of this sum, locomotive expenditure absorbs 4d. To this 4d., if we add signalling, permanent way, and wagon costs, we shall arrive at the total haulage cost on the track. It is impossible to give any exact figure as to the cost of these three items, but, taking the comparative total amount paid in wages for locomotive work and the amounts paid for permanent way work and signalling work as a guide, it would seem that these two items together are even less important than the locomotive cost. With regard to the third item, the cost of the wagon in which our ton of goods travels, we can only arrive at a very rough estimate. The net cost of a railway-wagon-hour is half a farthing, and its average load, when laden, may be put at 5 tons. Consequently, the cost of carrying 1 ton in the wagon for ten hours would be ¼d. If the wagon only carried 2½ tons, the cost would be ½d. It would therefore seem reasonable to suppose that the total net cost of hauling a ton of goods on the railway-track from London to York would be about 8d., or, to meet possible objections to this estimate, let us say 1s.

When we consider what a small fraction 1s. is of the total amount charged for the entire job we realise that the cost of haulage on the rail, once the goods are behind the locomotive, is almost negligible. The real cost of transport is therefore in terminal work. In the instance given this haulage cost amounts to less than 2 per cent. of the total charge, but over an average of goods of all grades the cost of haulage amounts to 5 per cent. of the total charge made. The remaining 95 per cent. is absorbed in terminal expenditure, including cartage and overhead charges.

The disproportion between haulage expenditure and terminal expenditure is due to the cumbersome and slow methods employed at terminals in transhipping goods from road vehicles to rail vehicles, and *vice versâ*; and in shunting goods wagons from one railway system to another, and getting wagons into desired positions in the trains of which they form part.

Transhipment is done almost entirely by hand labour, and shunting is carried out by locomotives, men and horses. Both these processes are so slow that an undue detention of both road vehicles and rail vehicles is involved, and consequently large tracts of land are required for standing room for vehicles. The total area of land occupied by railway companies within a mean radius of 8 miles of Charing Cross amounts to nearly 5 sq. miles, excluding tracks and passenger stations. The most expensive plots of this land have been valued at from £3 to £4 per square foot. The total capital value of the whole 5 sq. miles I will not attempt to guess, but the rateable valuable of all railway

* Abstract of a paper on "Goods Transport Reform," by Mr. A. W. Gattie.

property in the much smaller area of the Administrative County of London is, at 7s. 4d., £2,357,514. The capital value would, at thirty years' purchase, amount to £70,000,000.

The large area of land required for terminal operations is due to the fact that a railway wagon is immobile for 97 per cent. of its time, and mobile on the track for the remaining 3 per cent. This low efficiency of mobility necessitates the employment of a vast number of wagons—viz., 1,400,000—as, owing to terminal methods, only a very meagre number are actually in use (certainly less than 1 per cent.), as the mobility of a wagon is more often than not unladen mobility.

It is quite clear that if the laden mobility of a wagon could be increased from, say, 1 per cent. of its time to 10 per cent. of its time, it would get through ten times the amount of work, and, if so, only one-tenth of the number of wagons would be needed, and only one-eleventh of the area of standing-room would be required for them. But, in order to increase the laden mobility of a wagon, its hours of detention must be correspondingly decreased, and to do this involves a very complete and drastic reform in our method of unloading and manipulating goods trains at terminals; and this more particularly in great and densely-populated centres.

At the present moment London has seventy-four goods stations for dealing with general merchandise, besides coal and cattle yards. Some of these goods stations are nearly a mile long, they have no particular shape or design or arrangement, they are scattered all over London without any order or method, and they are nearly all devoid of modern equipment. One large London goods station is equipped with worn-out hand cranes, erected sixty years ago. These cranes can barely hoist a few hundred-weight; they are much too short in their reach, and have only an actual output of 25 per cent. of the energy put into them. One of the worst features of the present terminal arrangements of London is the multiplicity of its goods stations, as these seventy-four depôts need no less than 700 inter-goods station trains per day to maintain their requisite intercommunication. In view of the obvious disadvantages of the existing arrangements for goods handling in all large centres, and the great advantage which would result from their economic reform, the question arises whether in London, for example, it would not be desirable to erect one central goods station where nearly all the necessary work could be done in 1 per cent. of the time, on 2 per cent. of the space, and for 20 per cent. of the cost.

The answer is obviously that it would be most desirable, and in making this suggestion, and claiming its practicability, the greatest economic reform the world has ever seen is suggested, because transport affects every trade. Cheap transport would benefit everybody. It is true we have had the locomotive for seventy years, but it has been crippled and handicapped. We have not had anything like a full use of the locomotive. If we can do away with the terminal waste of time, space, and energy, we can have cheap transport.

Adverse opinion is the inevitable outcome of intimate knowledge of actual conditions, and lack of knowledge of scientific possibilities. The difficulties of the situation were appreciated, but the scientific means by which those difficulties could be overcome were not understood.

It has been proved in practice the detachable container system increases the efficiency of a goods wagon to eighty-six times its present average efficiency. The necessity for the elimination of shock or concussion in the process of rapid sorting of heavy goods is obvious, and so is the advantage of automatically conveying a load, bale, or parcel of goods from any spot in the building to any other spot—that is to say, providing for the automatic halt of a load, bale, or parcel at a point predetermined by the operator despatching it. You have all heard of the magic carpet of the East, which conveyed the person sitting on it to any place he wanted to go to.

In the Clearing House the magic carpet will be represented by steel trays of any required size, and the djinn doing the work is electro-magnetism, the action of which is controlled by the operator pushing buttons. How these trays, when fed, are able to sort goods at a speed of 1,000 bales per minute, and why these thousands of trays always go where they are told to and never get in one another's way is, I think, best explained at Battersea. Equipped with the requisite machinery, the London Goods Clearing House would be easily able to deal with 100,000 tons of goods per twenty-four hours, which might consist of 3,000,000 different items of all sorts, shapes, and sizes. Railway communication would be made by means of ten underground tubes of an internal diameter of 16½ ft., a size which accommodates any goods train travelling in this country. These ten tubes will take the courses shown on the map and provide a triple route of access to and from every railway system in the country.

Details of these triple routes are given in the appendix of the lecturer's paper at the Royal Society of Arts, viz.:—Main Route, Subsidiary Route, Emergency Route.

On a train entering the Clearing House and coming to a standstill it would be immediately relieved of its load of incoming containers by cranes, and the same or another set of cranes would reload the train with outgoing containers appropriate to the route the train was required to take. These outgoing containers would be placed upon the train in any desired order. Thus the whole work of actual unloading and reloading and marshalling of a train would be done in a few minutes, without any delay or any need for shunting, and without even uncoupling the electric locomotives attached to either end of it.

It will be understood that the load of incoming containers would not need when entering the Clearing House to be arranged in any order. Those loads needing transhipment to another railway system would be automatically placed in position to be loaded on to the required outgoing train. Loads for delivery in London would be hoisted on to lorries, which would be brought into immediate vertical proximity to the vehicle being unloaded. Unlike the ordinary goods station, where sometimes vehicles exchanging loads are a quarter of a mile apart, the road approaches of the Clearing House consist of twelve wide bridges, bridging the railway tracks at right angles, there being gaps between the bridges giving access to the rails below at any desired point exposed on any desired track.

It will, of course, be understood that a large proportion of the incoming containers would bring miscellaneous loads for many consignees addressed to all parts of the world. These "mixed" containers would be hoisted into one of the sorting compartments of the Clearing House, opened, and the contents distributed over the whole building by the automatic machinery I have mentioned, so that all goods for Birmingham would go to the Birmingham compartment, and all goods for Sheffield would go to the Sheffield compartment, and each item would be packed in its appropriate outgoing container and despatched by road or rail as required.

In the Clearing House a heavy box-container would always be handled by machinery, but elsewhere it could be dealt with without a crane or other machinery, by the simple expedient of opening the doors, either at the side or the end, and taking the goods out in the ordinary way. The mere fact of a container being detachable from the vehicle on which it travels does not necessitate its being hoisted off that vehicle by a crane. In order to take a Dutch cheese out of a container it would not be necessary to employ a crane. The fact of a container being detachable affords a facility which can be used if needful or convenient, but not otherwise. A container may take almost any form. A container is simply that which contains. The strict dictionary meaning of the word is that which holds together, and that is exactly what I mean in using the word. If a load consisted of a bundle of scaffold poles tied together with ropes, then the ropes would be the container. If the load consisted of corrugated-iron plates, they would need to be battened together, and the battens would be the container.

It is painful to watch a load of corrugated-iron plates being unloaded by hand. The men's hands are always bleeding by the time the job is done. All that painfully stupid, tedious work is avoided by the container system. It must be remembered that there is nothing to prevent the battens being unfastened when and where it is necessary to handle the plates individually. Because you may find it convenient to carry potatoes in a sack, that does not prevent you from boiling them a saucepanful at a time. The removal of furniture to or from the Continent has been invariably done on the detachable container system for as long as I can remember. The container system has no disadvantages that I know of. The great advantage of the system is that loading and unloading of road and rail vehicles can be done in minutes instead of hours or days. If you can unload and reload a train in ten minutes instead of ten hours it follows that you can berth sixty times as many trains on the same space, or the same number of trains on a sixtieth of that space.

At the suggestion of Mr. John Burns, the estimates of Revenue and Expenditure of the proposed London Goods Clearing House were submitted to Mr. Edgar Harper, formerly Statistical Officer of the London County Council, for examination and report. Mr. Harper, in his Report, estimates that, under Clearing House conditions, the number of lorries required to carry out the work of collection and delivery of general merchandise within the administrative County of London would be 5,000 vehicles. This figure represents an economy of about 95 per cent. of the slow-going van traffic now blocking London streets. In other words, this means that one Clearing House motor lorry could do the work of twenty of the vans now inefficiently loitering on London streets. I, personally, estimate it could do more, but I will accept Mr. Harper's figure, conservative though it be. At first sight this figure is astonishing, but when it is remembered that the 100,000 vehicles are an unorganised mob, and that the 5,000 vehicles are a highly-disciplined and highly-organised army, it gives us pause. There are upwards of 100,000 carts and vans now blocking London streets.

One lorry would leave the Clearing House loaded with goods for a particular street, and having delivered the various consignments to the various warehouses, the carman would reload with goods collected from those warehouses and return to the Clearing House. There would be no loitering, and no necessity to loiter, on the streets, and no unnecessary detention at the Clearing House; a few minutes would be ample time to hoist off the incoming container and hoist on the outgoing container.

Under Clearing House conditions one lorry would visit one street or one warehouse and collect or deliver its load. Under existing conditions twenty vans visit twenty streets or warehouses, and each collects or delivers one-twentieth of its load in a street or at a warehouse.

I would like to point out that the proposed London Goods Clearing House Railway Company is an enterprise—a commercial enterprise, and in no sense of the word an experiment, even in the broadest sense of the word. It is not proposed to expend £14,000,000 on an experiment, or to expend £14,000 or £1,400. We are dealing with fully-ascertained facts from start to finish.

There is no experiment about the purchase of land, which is the largest item, nor the Tube railways feeding the Clearing House, nor the locomotives hauling the trains, nor the 5,000 motor lorries working on the roads; nor in the Clearing House itself from roof to basement is there one single thing, structural or mechanical, of an experimental nature. An experiment is an act performed to confirm or disprove a theory or something unknown or in doubt.

THE SURVEYORS' INSTITUTION.

THE annual general meeting of the Surveyors' Institution was held at No. 12, Great George-street on the 25th ult., when the forty-sixth annual Report of the Council was read and adopted. From the Report we take the following:—

"The statistics, with which it has become customary to open the annual Report of the Council, again show a substantial addition to the membership, the total for 1914 exceeding that of the previous year by 381, an increase which has only once been exceeded. The growth of over 700 in two years must to a considerable extent be looked upon as exceptional, having been mainly caused by the desire of intending professional Associates to enter prior to the closing of the doors to those who have not passed the Final as well as the Intermediate Examination. The grand total of all classes of members now reaches 5,481.

The number of candidates presenting themselves for the Intermediate and Final Examinations in March last was again large, the total being 1,095, compared with 1,266 in 1913, and

1,102 in 1912. The drop in the number of candidates for the Intermediate Examination shows signs of a return to more normal conditions. It is true that the total of those who sat for the Final was increased by forty-nine, but the factors influencing the numbers, which were referred to in detail in previous Reports, would necessarily affect the Intermediate Examination, whether by way of increase or decrease, more quickly than the Final.

Seventy candidates out of the total of 970 who came up for the Professional Examinations in London sat for the typical subject in which they had been referred back on a previous occasion.

Of the nine "Land Agency" candidates one again failed; of the twenty-six candidates in the "Valuation" division twenty-four passed; of the thirty-five "Building" and "Quantity Surveyor" candidates two again failed to obtain their pass marks.

The competition for the Institution scholarships for 1913 was again disappointing, only one candidate of sufficient merit presenting himself for examination. This was Mr. R. H. Jerman, to whom a scholarship of £80 per annum tenable at Oxford University was awarded.

It has been a matter of regret to the Council that the competition for these scholarships has not been greater, and they have come to the conclusion that the conditions, upon which they have been held up to the present, were perhaps unduly stringent.

The Gold Medal for the best paper read during the session 1912-13 was awarded to Mr. M. C. Duchesne for his thoughtful and original paper on "English Timber: Its Markets, Value, and Production." Mr. Duchesne has given much time to this question, and his proposals for reviving and improving sylviculture in Great Britain are worthy of careful study.

The interest of the papers read during the current session has been well sustained, Mr. Fearnsides, the Sorby Professor of Geology at Sheffield University, opening with a paper, "On the Part Played by Water in Macadam Road Construction," followed by Professor Ainsworth Davis, the Principal of the Royal Agricultural College, on "Modern Science and Modern Agriculture."

More immediately professional subjects were dealt with by Mr. George Corderoy in "Measuring and Quantity Surveying," Mr. F. W. Hunt in "Value as Applied to Real Estate," and Mr. Graham Mould in "The Law of Dilapidations"; while Mr. W. W. Jenkinson supplied a more distinctly literary character to the session by a charming paper on "London Before the Fire, as Referred to in Sixteenth and Seventeenth Century Literature."

The Rural and Urban Reports of the semi-official Land Inquiry Committee necessarily came up for discussion, being introduced by Mr. Christopher Turnor and Mr. J. Dawbarn Young respectively. In each case it was found necessary to allot a second evening to the discussion of the proposals.

The President's Prize for the best paper read at a junior meeting was awarded to Mr. Bernand Briant for his "Notes on Sanitary Science." Mr. Briant is a holder of the Special Diploma in the subject of his paper, and is therefore in a position to write with authority thereon.

The work of reorganising the Forestry Collection has made considerable progress during the year, and further interesting exhibits will be added after structural alterations to the museum are completed. The Council has arranged to extend the floor space of the gallery, so that more room will be available for exhibits, and especially those relating to the commercial utilisation of English timber and underwood.

A feature will be made of the commercial side of forestry, illustrating the uses to which English timber and underwood are put, and the valuable properties possessed by the different varieties for special purposes. It is also proposed to illustrate the conversion of underwood by means of rural industries, and examples are already included of wooden barrel hoops, clogs, oak swill baskets, helves, handles, sprags, etc.

A complete exhibit of the timbers used in building is being installed. This should interest many branches of the profession, not only the building surveyors and architects, but also those concerned in the management of estates and woodlands, as showing comparisons between the timber grown in other countries and that grown from the same species in our woods. In this exhibit the common and botanical names of the trees from which the timber is grown will be given, and also the trade names of the timber. There has always been considerable confusion of these trade terms—influenced often by the port of origin or arrival—and this exhibit of building timbers should help to throw considerable light on the subject. The cases of injurious insects have been remounted, and the information on the labels has been brought up to date. Cases illustrating the cones and seeds of trees have also been mounted, and an exhibit of wrest planks for pianos made from the finest English quartered beech has been added.

At the instance of the Quantity Surveyors' Committee a circular was issued to ascertain what members of the Institution practised mainly in that branch of the profession; and it is hoped that the replies to that circular, and the fact that the attention of members has been specially drawn to the existence of that Committee, may have the effect of leading quantity surveyors to bring their difficulties and problems to the Institution for solution.

Meetings of the Special Diploma Sections in Forestry and Sanitary Science have been held; the latter have done good work in drawing up suggestions for the amendment of the London County Council Sanitary By-laws, and have since been engaged in considering in detail the draft model by-laws of the Local Government Board.

The area covered by the work of the Institution during the year has been wide. In July last the Council joined with the Royal Institute of British Architects in a deputation to the Prime Minister for the purpose of impressing upon him the necessity for immediate concerted action in connection with the provision of arterial roads and town-planning schemes for Greater London. As a result of this deputation a conference was called by the President of the Local Government Board, at which local authorities, institutions, and other bodies interested were represented; Sub-Committees have been set up, upon which members of the Institution have been included, and there is reason to hope that a way out of the existing chaos may be evolved.

The Council have for some time recognised the importance of greater scientific study being given to the construction of arterial and other roads. The change in the traffic passing along roads, and its ever-increasing weight and speed, clearly indicate that road engineers and surveyors of the future will have to be far more fully and scientifically equipped than was necessary in the past. Apart from pupilage in a practising surveyor's office, little or no provision is made for the more advanced training now required, and the Council have therefore thought it desirable to bring this need to the notice of the Universities, who have done so much to advance the scientific side of professional knowledge in other directions.

The Finance Act, 1910, having been long enough in operation for its machinery in working to be tested, a Memorandum drawing attention to difficulties which had become evident was addressed to the authorities by the Council shortly before the issue of the last annual Report. This was later in the year supplemented by a lengthy statement on the working of that statute, drawn up and issued by the Institution and the other bodies comprising the Land Conference.

The draft regulations of the London County Council with regard to the erection of reinforced-concrete buildings, of which statutory notice must be given to this Institution under sect. 23 (4) of the London County Council (General Powers) Act, have received detailed consideration, and the recommendations of the Council thereon have been addressed to the Local Government Board.

The Reports of the Land Inquiry Committee, together with the policy foreshadowed by the Chancellor of the Exchequer, and approved by the Prime Minister, have received close attention from the Council. On the rural question a Memorandum has been drawn up which was presented to the Minister of Agriculture at a deputation from the Institution, when he was good enough to give very considerable time and attention for the purpose of ascertaining the views held by the profession on farm labourers' wages, rural housing, and the tenure of agricultural land.

The Auctioneers' and Estate Agents' Registration Bill is one in which Members of the Surveyors' Institution must naturally take a keen interest. Its provisions were carefully considered by the Council, who, however, felt unable to accord it their support, because in their opinion it would give a definite and recognised qualification to certain practitioners, which at present they do not possess, without subjecting them to any effective discipline with regard to carrying on their business in a professional manner."

CORRESPONDENCE.

London Building Trade Dispute.

SIR,—The dispute in the building trade of London has now lasted some nineteen weeks, and appears likely to extend to a national dispute; it therefore seems to be a fitting time for placing before the public a few salient points respecting the issues involved.

When the fact is taken into consideration that the public are being asked to contribute to the depleted funds of some of the trade unions involved by means of street collections, charity concerts, and other means, it is time that the generous subscribers should wake up to the true position, for, although the builders are being attacked just now, it may soon be the case with manufacturers and all other employers of labour. It takes time to induce the "man in the street" to interest himself in any dispute which does not directly touch his pocket, but he soon calls out whenever there is a strike on the part of railway, tramway, omnibus, or transport workers, which affects his personal comfort or convenience.

There are certain principles governing all businesses, and one of the most elementary of such is the adherence to contracts entered into. This is the sole origin of the present trouble in the building trade. Only within the last eighteen months have new codes of working rules been agreed and signed by the London Master Builders' Association and the trade unions concerned, in which an advance of wages averaging 10 per cent. all round was granted. Within a few weeks of these rules being signed jobs were struck all over London without a moment's warning, in absolute defiance of one of the rules, which stated that:—"For the adjustment of all disputes and *to avoid stoppage of work*, it is agreed that, upon a difference arising between an employer, or upon the works of an employer, and any of his workmen, from any cause whatever, the subject-matter of the dispute should be referred to the Board of Conciliation." The reasons given for this action were in nearly all cases that certain workmen did not belong to a trade union.

The demands made by the trade unions now include the following:—

1. The wages of all classes of workmen (both skilled and unskilled) to be advanced a further penny per hour. (It should be noted that this further advance would increase the wages of the unskilled labourer during the past eighteen months from 7d. to 9d. per hour=30 per cent. advance.)
2. No overtime to be worked unless application is made to the trade union, and to be paid for at the rate of time and a half for the first two hours, double time after.
3. Workmen employed outside the London district to receive 2s. 6d per day extra, with 15s. per week as a maximum, with travelling money and time occupied in travelling in addition.
4. Rules to be terminated at three months' notice, such notice not to terminate during the winter.
5. Workmen employed at a height of 60 ft. to be paid one penny per hour extra.

"No conciliation for the settlement of disputes."

My Association has been informed by the trade union representatives that it must regard the suggested increase of wages as *moderate*, many of the workmen wishing to demand 1s. 3d. and 1s. 6d. per hour.

The demands comprised in this new code of rules must be eminently instructive to those London builders who profess to be unable to discern any adequate reason for supporting the London Master Builders' Association.

They may also be instructive to the public, who are already complaining of the greatly increased cost of building operations, which arises chiefly from the recent advances in wages, and from other expenses for the benefit of the workmen, such as Health and Unemployment Insurance and the greatly increased rates for insurance under the Workmen's Compensation Act.

In the present dispute my Association is contending for the honest adherence to trade agreements. It will be observed that incidentally there are other very serious issues now involved.

I may add that my Association does not attach much importance to the recent ballots. We are informed that no workman was allowed to vote unless he attended at his lodge for that purpose and voted in the presence of the officials. It is not surprising that the bulk of the workmen would refuse to vote under such circumstances.

I note that it is intimated in the Press that the leaders were in favour of a settlement; but

this is difficult to believe in face of the recommendations accompanying the ballot paper, which not only confused the issue, but in some cases definitely invited the rejection of the peace proposals.

In one case the following words actually appear: "We desire to express the opinion that the offer of the London Master Builders' Association represents a distinct defeat so far as we are concerned. . . . We urge you to continue the fight."

In conclusion, I would draw attention to one very vital question in dispute, and one to which no honourable employer could possibly consent. The men demand that all those who have remained at work during the dispute shall be discharged, as they are what are called "blacklegs." Comment upon such an outrageous demand is needless.

Apologising for the length of this letter,

S. B. DEPREE (Secretary,
London Master Builders' Association).

ARCHITECTURAL SOCIETIES.

The Royal Institute of the Architects of Ireland: The Registration of Architects.

A general meeting of this Institute was held on Wednesday evening, May 20, at the Institute Rooms, No. 31, South Frederick-street, Dublin, to consider the attitude the architectural profession in Ireland should adopt towards the proposals of the Royal Institute of British Architects for extending the Charter of the latter body in place of proceeding with an effort to register the whole profession by means of a Parliamentary Bill. The President, Mr. R. Caulfeild Orpen, B.A., R.H.A., occupied the chair, and there was a large attendance of members.

The President referred to the gravity of the occasion and read a brief statement of the various proceedings in recent years to obtain the collective support of architects for a scheme of Registration by Bill, which had at one time been accepted as a general principle by the parent body in London, but which had recently been abandoned on the advice of counsel in favour of Registration by Charter. The proposals now under review would enable qualified architects to call themselves "Chartered Architects," and it was hoped that this hall-mark would have a similar effect to the original proposal, by which unqualified men would have been unable to designate themselves architects. The subject should be considered carefully, and any result arrived at only after all the possibilities had been weighed.

Mr. C. H. Ashworth, F.R.I.B.A., thought it fairly well established that a Parliamentary Bill was impossible and that half a loaf in this, as in other cases, would be better than no bread. The Institute should be supported now, and perhaps in the future the Bill that all desired might be passed.

Mr. C. A. Owen, B.A., F.R.I.B.A., agreed, but considered it desirable to emphasise that such support should be given only on condition that every effort would be made to press forward towards Registration.

Mr. H. Allberry, A.R.I.B.A., strongly opposed the present proposals as a substitute for Registration. The action of the Council of the R.I.B.A., from start to finish was not calculated to inspire confidence, and increased membership of a body in London would not satisfy those who wished for Registration in Ireland. It might prove that the half loaf would be really half a brick.

Mr. A. E. Murray, R.H.A., F.R.I.B.A., spoke in favour of the Charter, and Mr. G. F. Beckett, M.R.I.A.I., considered it a poor substitute for Registration.

Professor W. A. Scott, A.R.I.B.A., was of opinion that the Council of the Royal Institute of British Architects did not represent the architectural profession, at all events in Ireland. The scheme promoted by that body promised nothing but an inflated membership, and there was on definite pledge to proceed with Registration.

The President read correspondence with the R.I.B.A., in the course of which it transpired that while they were unable to send one qualified representative to Dublin to explain their new proposals it was suggested as an alternative that the Irish members should proceed to London, where they could vote on the scheme.

Mr. J. H. Webb, F.R.I.A.I., wished to know what would be the position of the Irish Institute if the Charter were sanctioned. The arrangement, as far as he could see, would take all the responsibility from the home Society and transfer it to a coterie—an architectural House of Lords—in London.

After further discussion the following resolution was proposed:—"That the members of the Royal Institute of the Architects of Ireland be furnished with a copy of the Bill drafted by the Royal Institute of British Architects, 1905, the Bill of the Society of Architects, 1913, the provisions of the proposed extended Charter, and the President's introductory address, and that the opinion of the members should be sought as to whether they approved the Bill or the Charter, and also whether the Irish Institute should support the British Institute in opposing the Parliamentary Bill promoted by the Society of Architects." The motion was carried by a majority, and the meeting was adjourned for a fortnight.

BOOKS.

Elgin: Past and Present. By HERBERT B. MACKINTOSH, F.S.A. Scot. (Elgin: J. D. Yeadon. 1914. 10s. 6d. net.)

THIS handsome volume, as the author explains, is really a much enlarged reissue of a work under the same title published by his father in 1891. As the book now stands it is a very complete record of the history of the city and its environs, and should become the standard source of information on the subject.

The origin of Elgin seems to be too deeply buried in the past to be unearthed at this date, but Mr. Mackintosh repeats the popular derivation from Helgy, a general of Sijurd who overran Morayshire about 927. He does not, however, suggest that this etymology is to be taken very seriously. As early as 1040 Elgin Castle was in existence, for King Duncan died there after being wounded by Macbeth, and a century later King David I. referred to it as "My Burgh of Elgin." The town has therefore a quite respectable antiquity, and when in 1224 the seat of the Diocese of Moray was removed to Elgin it became an important place ecclesiastically, second only in Scotland to St. Andrews. Little is known as to the size or condition of the Church of the Holy Trinity, which, by this change, became the cathedral, but Bishop Andrew Moray, a member of a wealthy and powerful family and a man of some ability, and who had seen Lincoln, rapidly converted the parish church into a building more fitted to the suddenly increased importance and dignity of its position. In fact, he built what must have been the finest cathedral in Scotland, with its two western towers and the great spire over the crossing. Mr. Mackintosh gives a number of illustrations from old prints, measured drawings, reconstructions, and photographs of the ruins as they are, which enable the reader to form a fairly correct mental image of the building as it appeared when it was "the pride of the land, the glory of the realm, the delight of wayfarers and strangers, a praise and a boast among foreign nations."

Though, of course, the cathedral is Elgin's chief claim to attention, there are other features about the place of some interest, which are very thoroughly dealt with in this book, such as the Bishop's Palace and the Greyfriars Church.

Mr. Mackintosh has, however, made the mistake of attempting to combine the popular guide-book with a serious work on local archæology. The result of this is a volume which any tourist would consider too long and too cumbersome to be of any use, while the more serious student is irritated by having to wade through long descriptions of scenery and bits of local gossip before he can get at what he wants. The author's intention, as stated in the Preface, was to write a book which should "fill a gap in the education of our youth by affording them some knowledge of the historical associations of their early home and its surroundings." Possibly for this limited class the scope of the book has been justly arranged, but the general reader will probably wish that it were either more of a guide-book or a more systematic archæological work. Most people, too, will find that the trick of printing the important words in each sentence in heavy type is annoying. The author's sense of humour must be of some rare Scottish brand. No Englishman with a particle of that indispensable quality could have solemnly written:—"Notwithstanding the introduction of gas, candles are still an article of daily use."

The book is furnished with a very complete index and a good map of the surrounding country, on the scale of 1 in. to a statute mile, reproduced from the last Ordnance Survey.

Useful Minerals and Rare Ores. By ALEXANDER MCLEOD. 4 in. by 6½ in.; 114 pp. First Edition. (Messrs. Wiley, U.S.A., and Chapman & Hall, Ltd., London. 1914. Price 5s. 6d. net.)

THIS little volume, well printed and strongly bound in leather, is written for the prospector, and aims at providing "severely simple but fully dependable means by which anyone can determine the useful minerals." After describing panning, the determination of hardness—most practically dealt with—and streak, surface indications and necessary simple apparatus are referred to. Then some forty pages follow giving tabular tests for minerals, classified, as they should be, on the results of simple field experiments, such as effervescence with acids, appearance and behaviour on heating and not from the chemical or mineralogical standpoint. The last thirty pages are devoted to the rare ores, and the book has an index. Some 200 minerals are dealt with, and, speaking with a recollection of the study of Bauerman and Dana, we find a surprising amount of material in this small work, which we commend to anyone who can take a simple laboratory course in manipulation.

GENERAL NEWS.

Housing Scheme, Finchley.

The Local Government Board have notified their approval, generally, of the scheme promoted by the Finchley District Council to borrow £93,443 wherewith to buy land of the Woodhouse Estate, North Finchley, for the erection thereon of 300 dwellings whereof they will let sixty at 7s. 6d. per week and 240 at 8s. 6d. per week. Five acres of the estate will be preserved as an open space when it is laid out after town-planning lines.

New Turnstile, High Holborn.

The north-east block at the corner of New Turnstile and High Holborn, which includes the old house which for many years past has been occupied as Tregaski's well-known book and print shop, is offered for sale as a building site. Great, Little, and New Turnstiles—the last-named being marked with a mural tablet bearing the date "1685"—were formed as footways into Lincoln's Inn Fields, and were obstructed with turnstiles on purpose to prevent the passage of vehicles, as well as the straying of cattle, when the adjacent fields to the north and south were used for grazing and pasturage. The three Turnstiles were at one time famed for their drapery, millinery, and other small-wares shops.

St. Mary's, Stamford.

The rector makes appeal for contributions towards the cost of preserving the tower and spire of this, one of the original thirteen parish churches—since reduced to five—of Stamford. The body of the church is of the late thirteenth-century period; the beautiful tower and spire are of the early thirteenth century. In the words of Sir Thomas G. Jackson, R.A., it would be a national loss did harm overtake what is "one of the gems of our native architecture." In the church is a fine modern screen designed by John D. Sedding.

Property Sales.

The landed properties just placed in the market include Harefield Place, with about 2,150 acres, near Uxbridge, the seat, *temp.* Edward III., of Sir John Newdegate, in whose house it vested during a long period. Alice, daughter of Sir John Spencer, of Althorpe, and widow of Ferdinando, fifth Earl of Derby, married, 1600, the Lord Keeper, Sir Thomas Egerton (Earl of Ellesmere), and bought Harefield Place. There they were visited by Milton when he lived at Horton, and on August 1, 1602, entertained Queen Elizabeth with a performance by Burbage of "Othello." In the church within the park are several monuments to the Newdegates (one by Grinling Gibbons) and the Ashbys of Breakspears, and the fine tomb, with effigy, of the Countess Alice.

The Architectural Association.

The Architectural Association is arranging an all-day visit to Great Maytham and Great Dixter, two houses near Robertsbridge, designed by Mr. Lutyens, on Saturday, June 13. Full particulars may be obtained on application to the Secretary, at the Architectural Association, 18, Tufton-street, S.W.

Leading Contents.

	PAGE
THE LONDON BUILDING TRADE DISPUTE	661
THE GROWTH OF MODESTY IN MODERN ARCHITECTS	662
ARCHITECTURE AND SCULPTURE AT THE ROYAL SCOTTISH ACADEMY	663
METROPOLITAN WATER BOARD: COMPETITION FOR NEW OFFICES	664
BRITISH ARCHITECTS IN PARIS	666
INCORPORATED CHURCH BUILDING SOCIETY	667
THE CONCRETE INSTITUTE	667
REINFORCED CONCRETE	668
GOODS TRANSPORT	670
THE SURVEYORS' INSTITUTION	671
LEGAL SECTION:—	
NOTES ON CURRENT CASES	675
LAW REPORTS	676
THE BUILDING TRADE:—	
THE LONDON BUILDING DISPUTE: FROM THE WORKMAN'S STANDPOINT	678
A LONDON BUILDER'S EXPERIENCES OF SANITARY OFFICIALS	679
TRADES UNIONISTS AS CONTRACTORS	680

ILLUSTRATIONS.

The Metropolitan Water Board Offices.

WE give this week illustrations of the selected design for the new offices for the Metropolitan Water Board and the designs submitted by Mr. H. T. Hare and Mr. H. S. East, and Mr. T. Edwin Cooper. An article on the competition appears on page 664.

MEETINGS.

FRIDAY AND SATURDAY, JUNE 5-6.

The Institution of Municipal and County Engineers.—Meeting of the Institution, to be held in the Scottish District at Dunfermline.

SATURDAY, JUNE 6.

The Royal Institution.—Mr. Sigismund Goetze, M.R.I., on "Studies on Expression in Art.—I. Origin and Development." 3 p.m.

MONDAY, JUNE 8.

The Royal Institute of British Architects.—(1) The fifteenth general meeting (business), to receive the Report of the scrutineers appointed to direct the election of the Council, Standing Committees, etc., for the year of office 1914-15; (2) adjourned special general meeting (Registration); (3) adjourned special general meeting (Professional Charges). 8 p.m.

WEDNESDAY, JUNE 10.

Royal Archæological Institute.—Mr. Philip Norman, LL.D., on "A Settlement of the Hanseatic League at Bergen in Norway." With lantern illustrations. 4.30. p.m.

THURSDAY, JUNE 11.

The Royal Institution.—Professor Silvanus P. Thompson, B.A., D.Sc., on "Faraday and the Foundations of Electrical Engineering."—II. 3 p.m.

SATURDAY, JUNE 13.

The Royal Institution.—Mr. Sigismund Goetze, M.R.I., on "Studies on Expression in Art.—II. Right Expression in Modern Conditions." 3 p.m.

COMPETITION NEWS.

It must be understood that the following paragraphs are printed as news, and not as advertisements; and that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur.

The list of current Competitions is printed on page 684.

Metropolitan Water Board Offices.

The competition for the new Central Offices, Rosebery-avenue, E.C., for the Metropolitan Water Board has resulted in the designs sent in by Mr H. Austen Hall, F.R.I.B.A., being selected by the assessor, Mr. E. Guy Dawber. The other competitors were:—Messrs. H. T. Hare & H. S. East, Edwin T. Hall, T. Edwin Cooper, H. O. Ellis & Clarke, and Brown & Barrow. An article on the competition appears on p. 664. We give the selected design in this issue.

Home for Nurses, Liverpool.

In a limited competition for a home to accommodate forty nurses in connection with the Stanley Hospital, Liverpool, the assessor recommended the design of Messrs. Briggs, Wolstenholme, & Thornely, F.R.I.B.A., of Liverpool and Blackburn, for adoption. At a meeting of the Board the assessor's report was adopted, and the architects were instructed to proceed with the working drawings, etc., at an estimated cost of £6,000.

School, Luton.

It is stated that in the limited competition for a new school at Denbigh-road, Luton, to accommodate 1,000 children, Mr. Percy Brockbank, of Southend, has been successful in securing the first award and has been entrusted with the execution of the work, which will cost about £12,000.

Police and Fire Stations, Redhill.

At the last meeting of the Reigate Town Council the Watch Committees reported as to the accommodation to be provided in the new Redhill Police and Fire Stations, and they recommended that competitive designs be invited for the erection of the building, and that premiums of forty, twenty, and ten guineas respectively be offered for the three best designs in order of merit. The Report was adopted.

Readjustment, etc., St. Pancras Town Hall.

Some time ago the St. Pancras Borough Council adopted recommendations as to the readjustment of the offices of the Town Hall, etc., and it was decided to obtain the services of a suitable architect, at a fee not exceeding one hundred guineas, to submit a rough scheme and estimate of the cost of the necessary alterations. After further consideration of the matter, the Parliamentary and General Purposes Committee state that they are now of opinion that this proposal should be varied and that, instead of the engagement of one architect at once, three firms should be invited to compete, and that premiums of fifty, thirty, and twenty guineas should be awarded in the order of merit of the schemes, and, subject to the Council deciding to proceed with a scheme, the firm placed first shall be invited to carry it into effect. At the meeting of the Borough Council last week the Committee therefore recommended (1) the recission of the Council's resolution to obtain the services of an architect at a suitable fee not exceeding one hundred guineas, for the purpose of preparing a rough scheme and estimate of the cost of the proposed alterations to the Town Hall, etc., and (2) the invitation of three firms to submit drawings in pencil, together with an approximate estimate of the cost of carrying out the works in connection with the proposed alterations, etc., to the Town Hall, in accordance with conditions arranged. The Committee also reported that in the event of the Council deciding to approve of the preceding paragraph, they (the Committee) have considered as to nominating suitable firms or architects to submit schemes as proposed, and they recommended the following:—Mr. A. J. Thomas, 28, Upper Park-road, N.W.; Messrs. Wonnacott & Cook, 6, Old Cavendish-street, W.; Mr. G. E. Elkington, 10, Audley-road, Hendon, N.W. Both the Committee's recommendations were approved.

BOOKS RECEIVED.

THE LONDON BUILDING ACTS, 1894-1909. By Banister F. and H. P. Fletcher. Fifth edition. (London: B. T. Batsford, Ltd. 10s. net.)

SMALL COUNTRY HOUSES: THEIR REPAIR AND ENLARGEMENT. (Forty examples chosen from five centuries.) By Lawrence Weaver. (London: *Country Life*, Tavistock-street, W.C. 15s. net.)

COMMERCIAL PAINTS AND PAINTING. By A. Seymour Jennings. (London: Constable & Co., Ltd. 6s. net.)

GARDENS IN THE MAKING. By Walter H. Godfrey. (London: B. T. Batsford, Ltd.; 5s. net.)

PRACTICAL TREATISE ON SUB-AQUEOUS FOUNDATIONS. By Chas. Evan Fowler. (London: Chapman & Hall, Ltd.; and New York: Jno. Wiley & Sons. 31s. 6d. net.)

HANDBOOK OF STRUCTURAL STEELWORK. (Redpath, Brown, & Co., Ltd.)

DISCOVERIES AT HAMPTON COURT.

Ornamental ceilings, cornices worked by Sir Christopher Wren, and stone doors, all in practically perfect condition, have been discovered (says the *Standard*) behind the old wall-paper in the Cardinal Wolsey Lodgings at Hampton Court. The lodgings consist of twenty rooms, two of which are panelled in beautifully-carved old oak, which have now come to light after 150 years.

ARCHITECTURE AND THE STAGE.

AT the Apollo a farce in three acts, entitled "The Little Lamb," translated from the German, is given by an exceptionally capable cast, among the members of which may be mentioned Arthur Whitby, who plays the part of Max Dubonnet, a manufacturer of mustard; his brother-in-law, Théophile Barribal, acted in a wonderful manner by Mr. Louis Calvert; Nigel Playfair, who takes the part of Henri Lafitte; Yvonne Dubonnet, played by Miss Mabel Burnege; Madame Dubonnet, by Miss Helen Haye; and Mimi Barribal, by Miss Laura Cowie. We have never seen a more brilliant cast, which would suffice to make a success of any piece, and "The Little Lamb," with its farcical ideas and abundance of ridiculous *contretemps*, is a success from beginning to end. The number of quite amusing situations and impossible positions in which the leading characters are placed in a couple of hours has, we should say, never been equalled, and the piece shows how absurd a knowledge of the past may make us in the present. It is throughout a play of cross-purposes.

The whole piece is given with one background—that of a room in Max Dubonnet's house, which is appropriate and suitable, even if its colouring is somewhat too marked and insistent for daily life; but the same may be said of the incidents of the play, and so scenery and incident match one another. The German writers have succeeded in producing an atmosphere which is entirely French in character!

FIFTY YEARS AGO.

From the *Builder* of June 4, 1864.

Double Acrostic.

THE LETTERS.

1. O'ER the waters gliding
   In the race it flies:
2. At the goal presiding
   He awards the prize.
3. To the trav'ller weary
   Glad and welcome view:
4. Sight as glad as cheery
   To the wave-tost crew.
5. LO! where youth and beauty
   Mingle hand in hand:
6. Thousands owe him duty—
   Bow to his command.
7. From a toil unblessèd,
   From a fate unkind,
   Oft the poor oppressèd
   Seek it, not to find.

THE WORDS.

When my Firsts have reckon'd
Each due estimate,
Then they send my second
Forth to learn their fate.
Many are rejected:
Still the lowest win:
Then my First selected,
Sees his work begin.

KEY.—THE LETTERS.

1.	Boa	T.
2.	Umpir	E.
3.	In	N.
4.	Lan	D.
5.	Danc	E.
6.	EmperoR.	
7.	Redres	S.

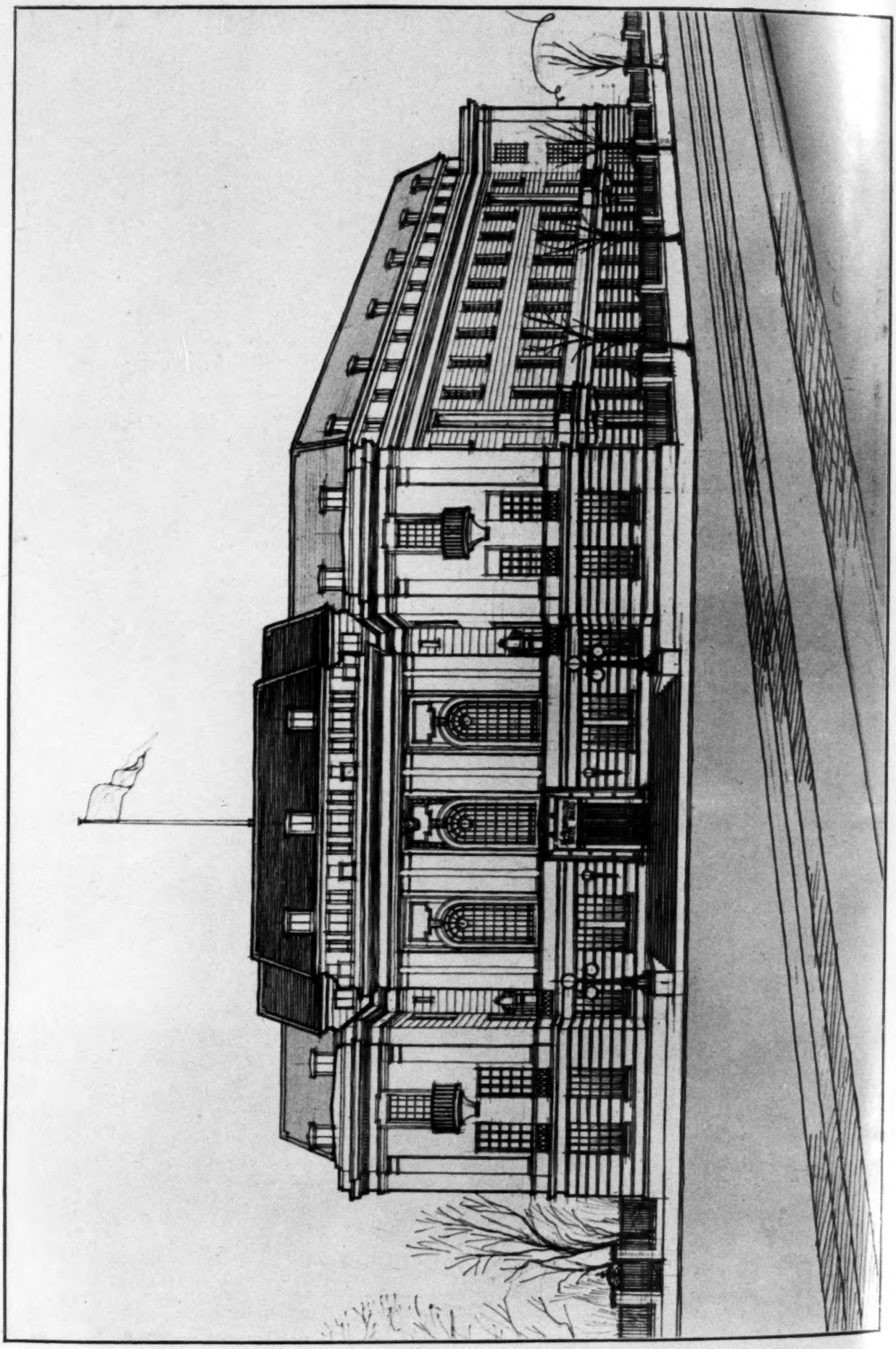
THE WORDS.

Builder.
Tenders.

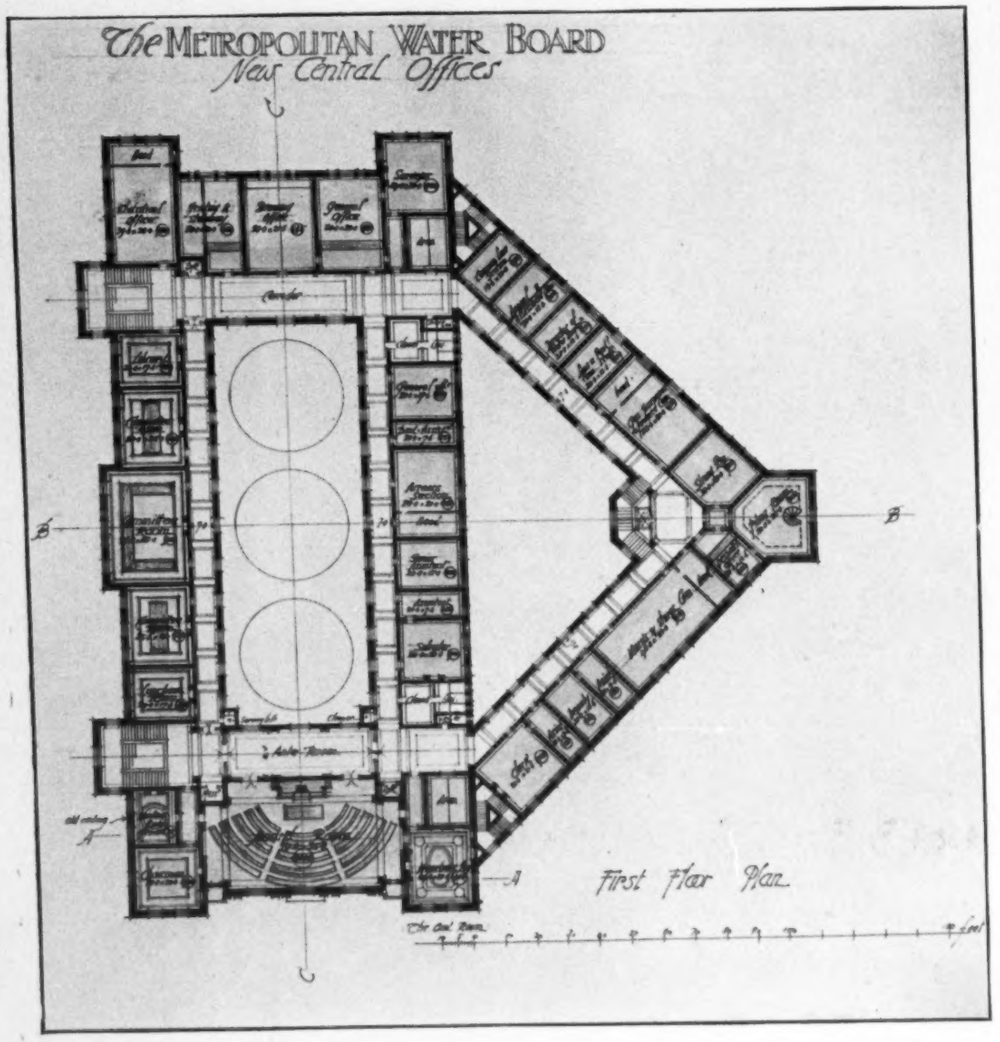
[*** This extract from the *Builder* of fifty years ago shows that we always appealed to every class of reader.—ED.]

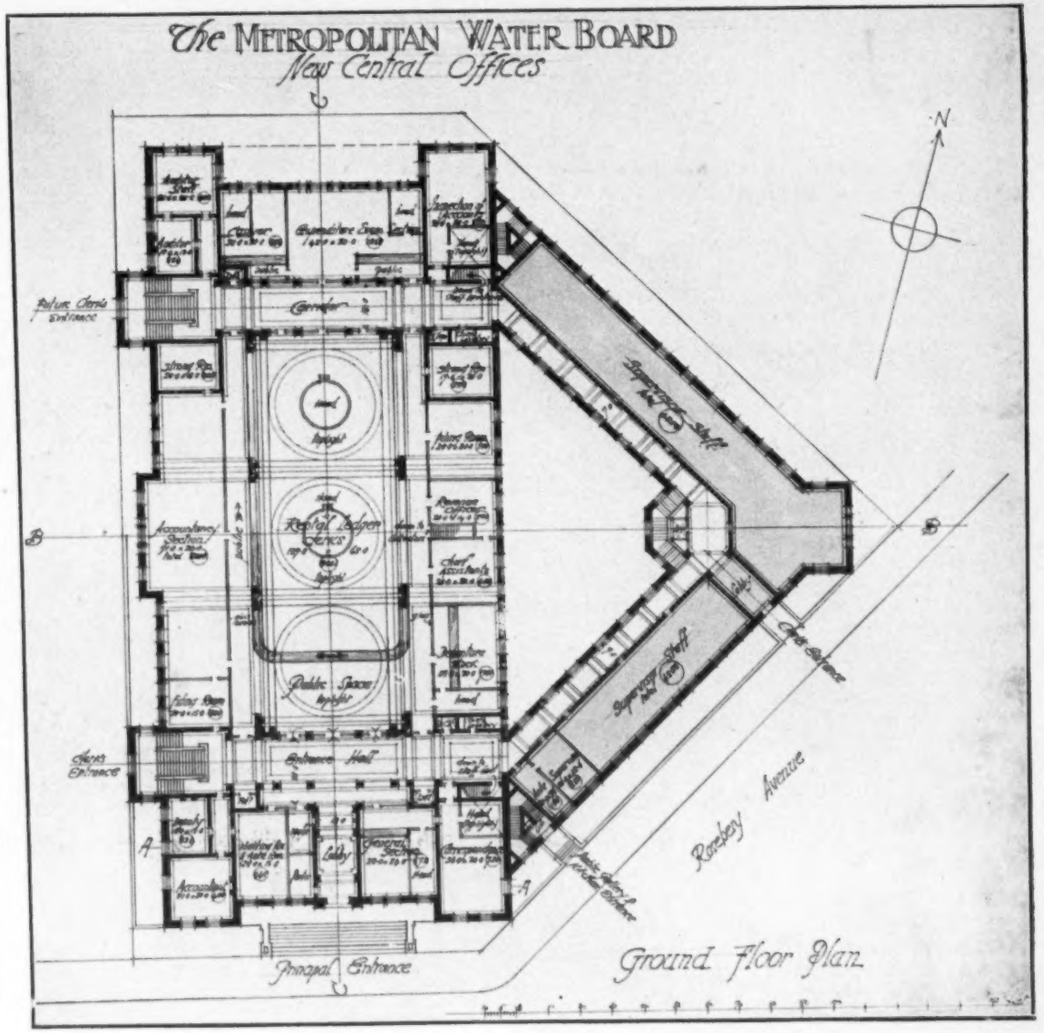
KINGSTON VALE.

The Committee of the Wimbledon and Putney Commons (Kingston Vale) Extension Fund have issued a statement showing that of the proposed area of 177 acres which it was proposed to acquire at a price of £55,000 they have purchased 126 acres at a cost of £38,500. There remains a portion of 41 acres, for which a sum of £12,000 is still required.



METROPOLITAN WATER BOARD OFFICES: SELECTED DESIGN.—By Mr. H. Austen Hall, F.R.I.B.A.





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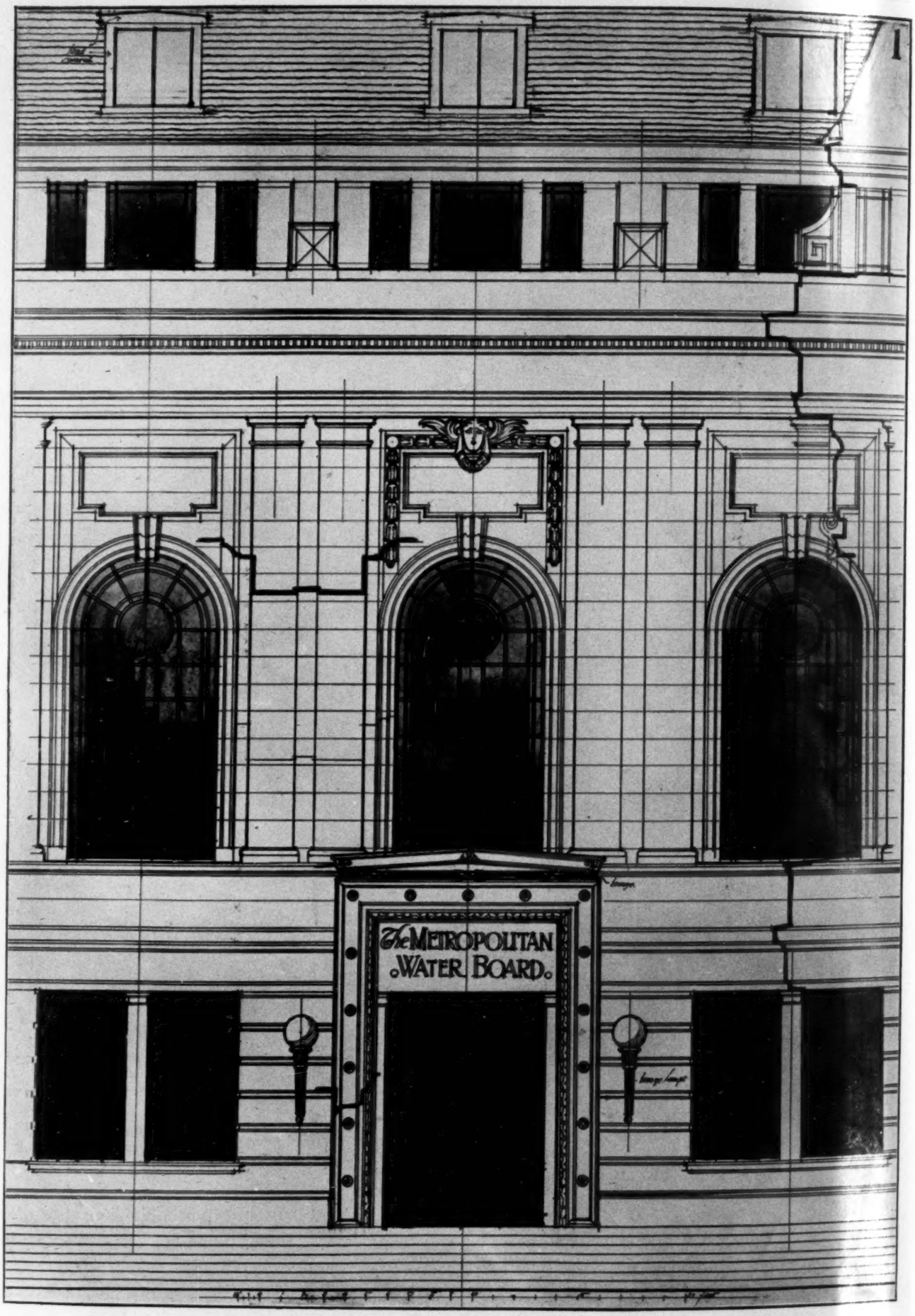

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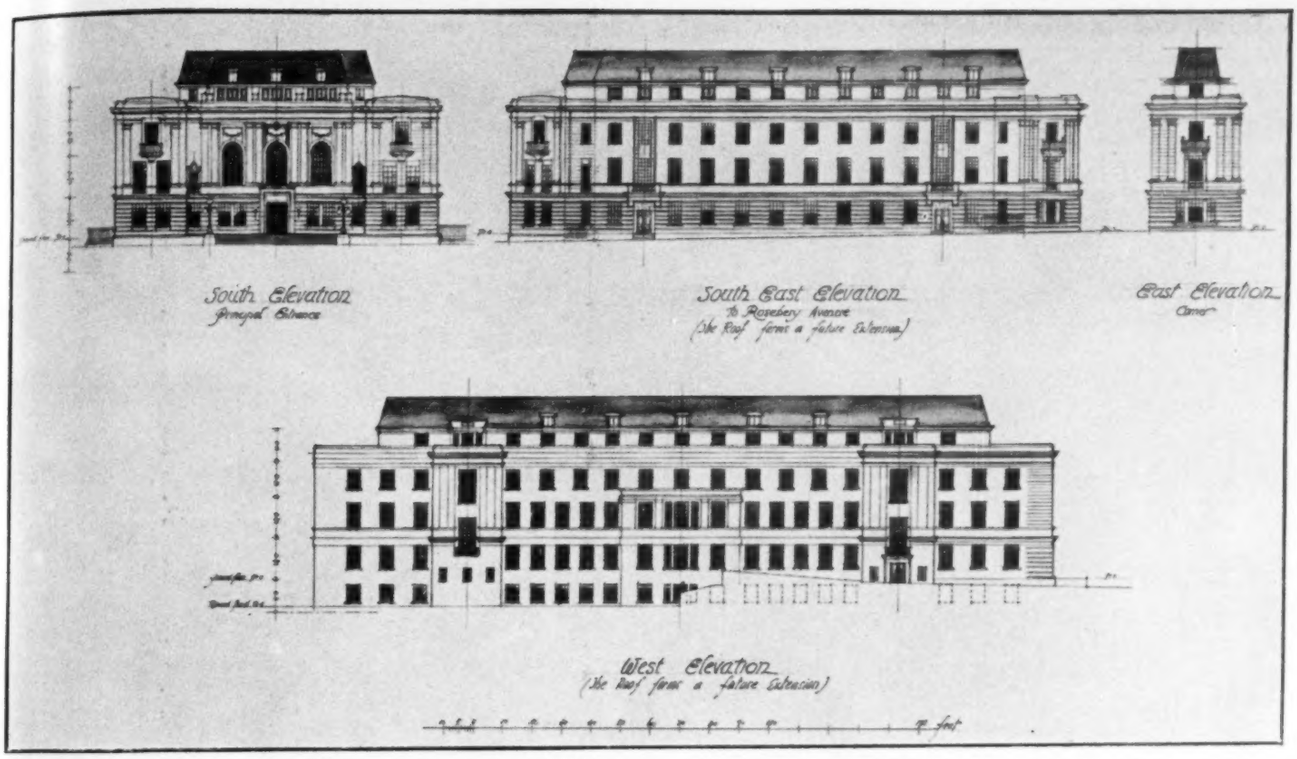

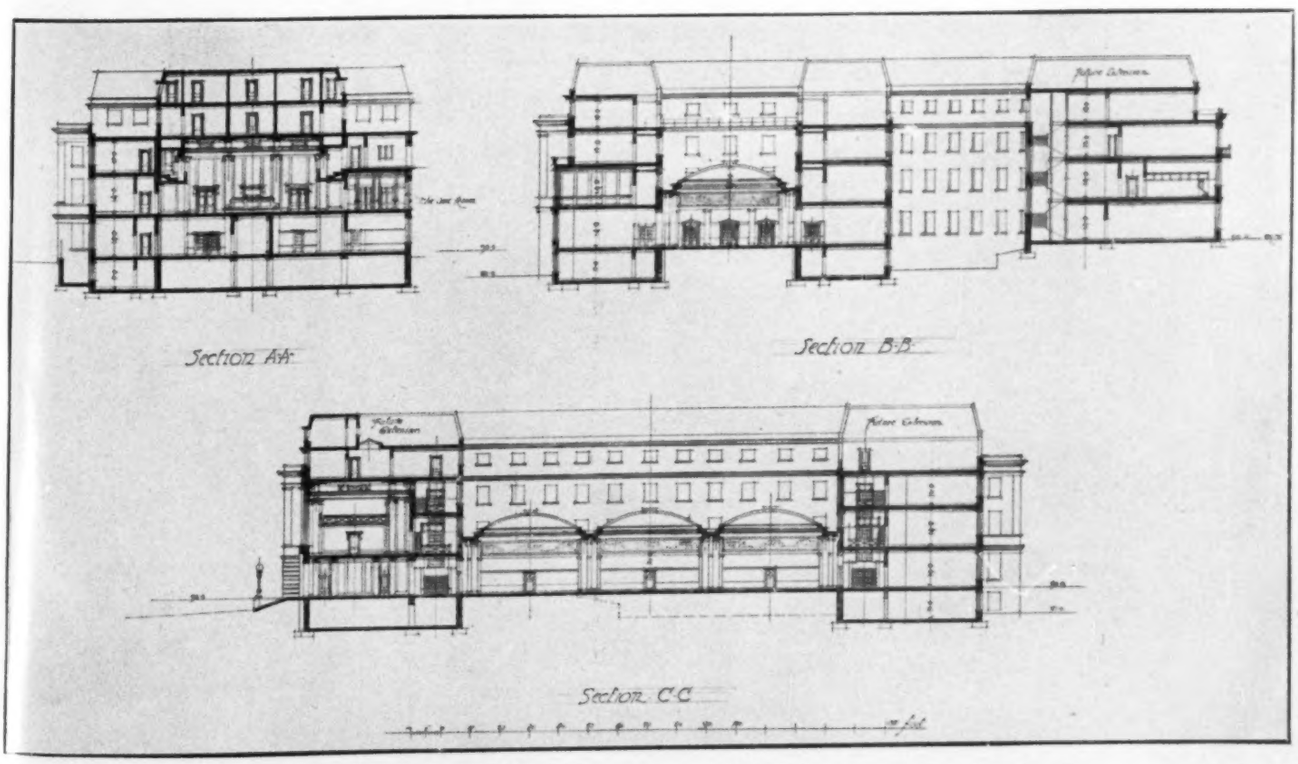

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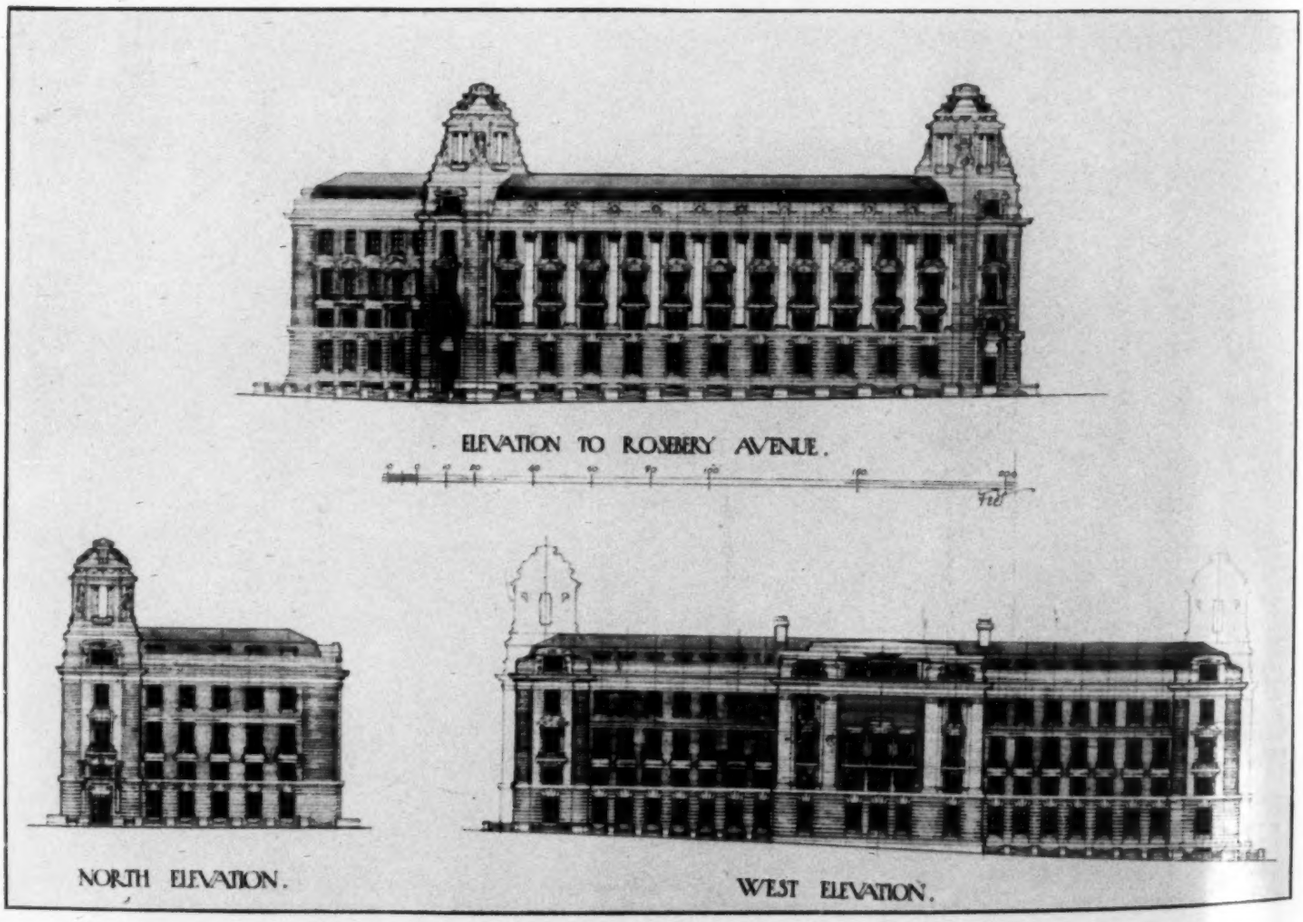
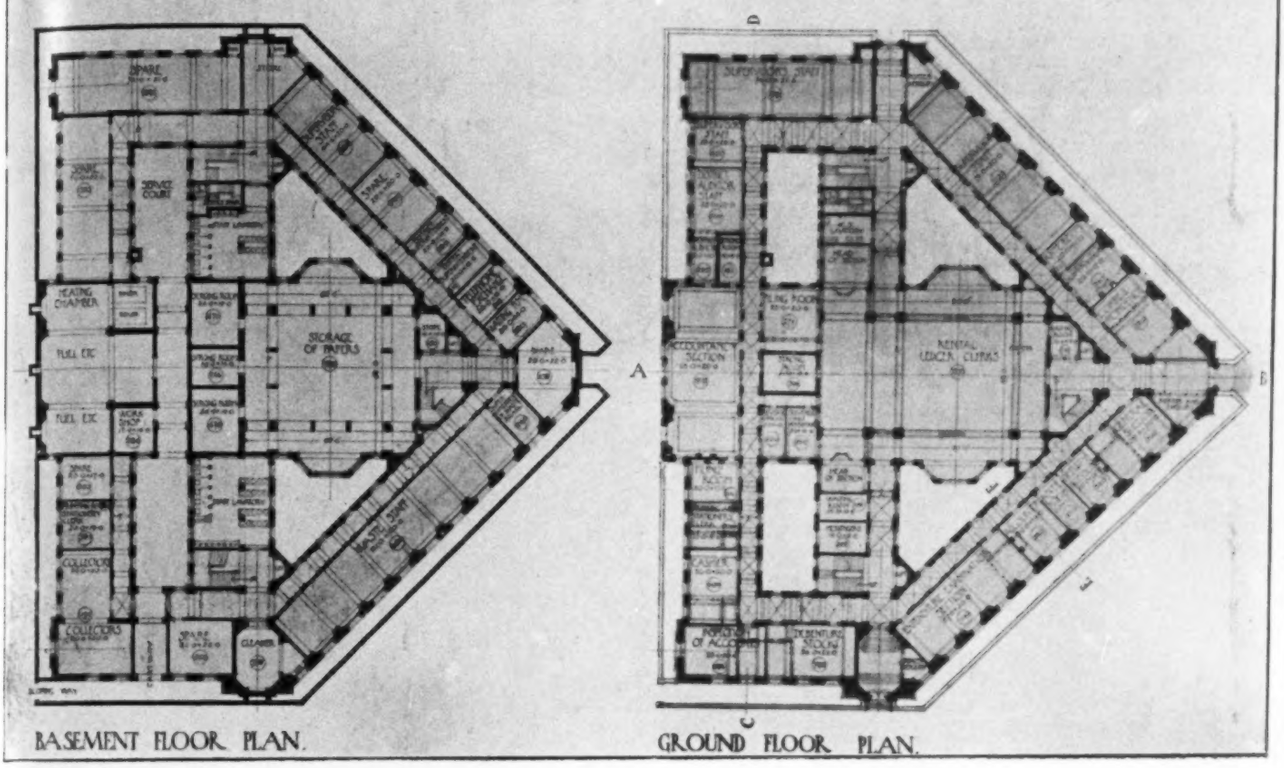


METROPOLITAN WATER BOARD OFFICES.—Design by Mr. H. T. Hare, F.R.I.B.A., and Mr. H. S. East, A.R.I.B.A.

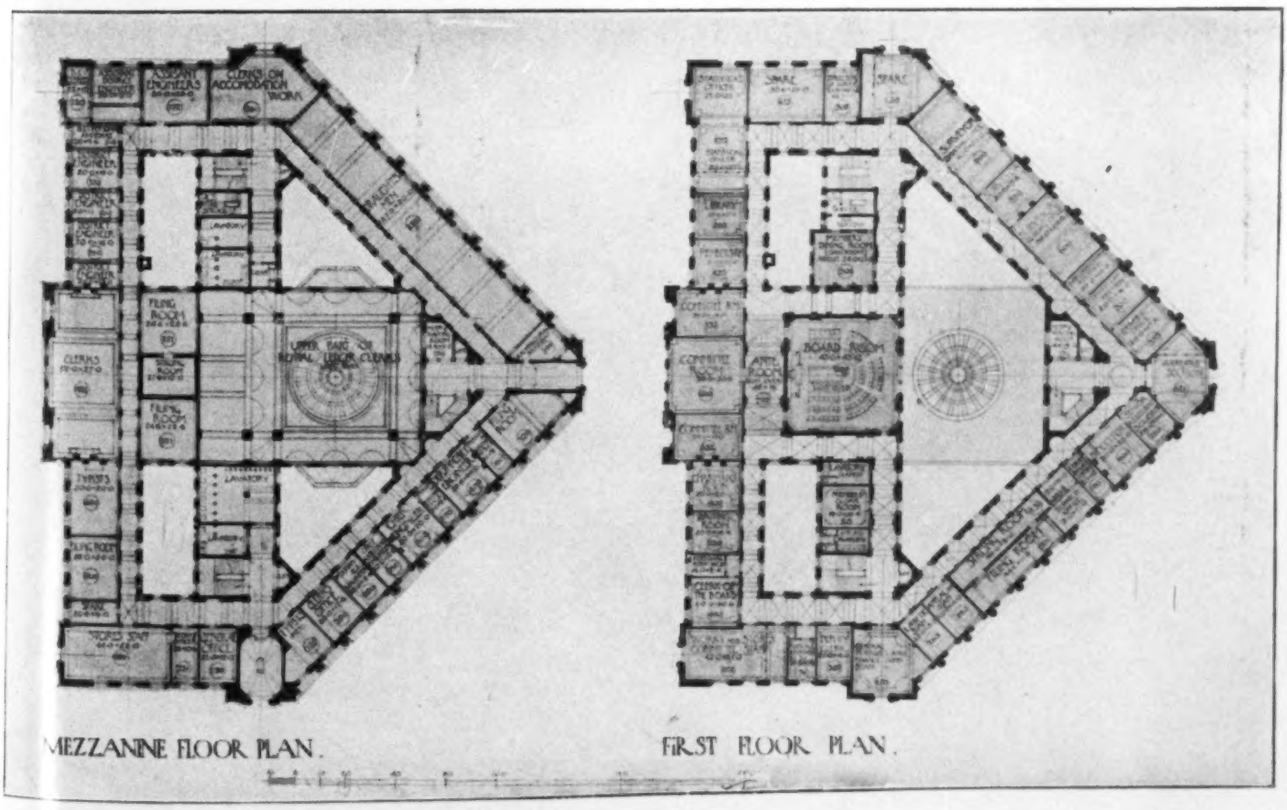
METROPOLITAN WATER BOARD.
PROPOSED NEW CENTRAL OFFICES
ROSEBERY AVENUE. E.C.

No. 1.



BASEMENT FLOOR PLAN.

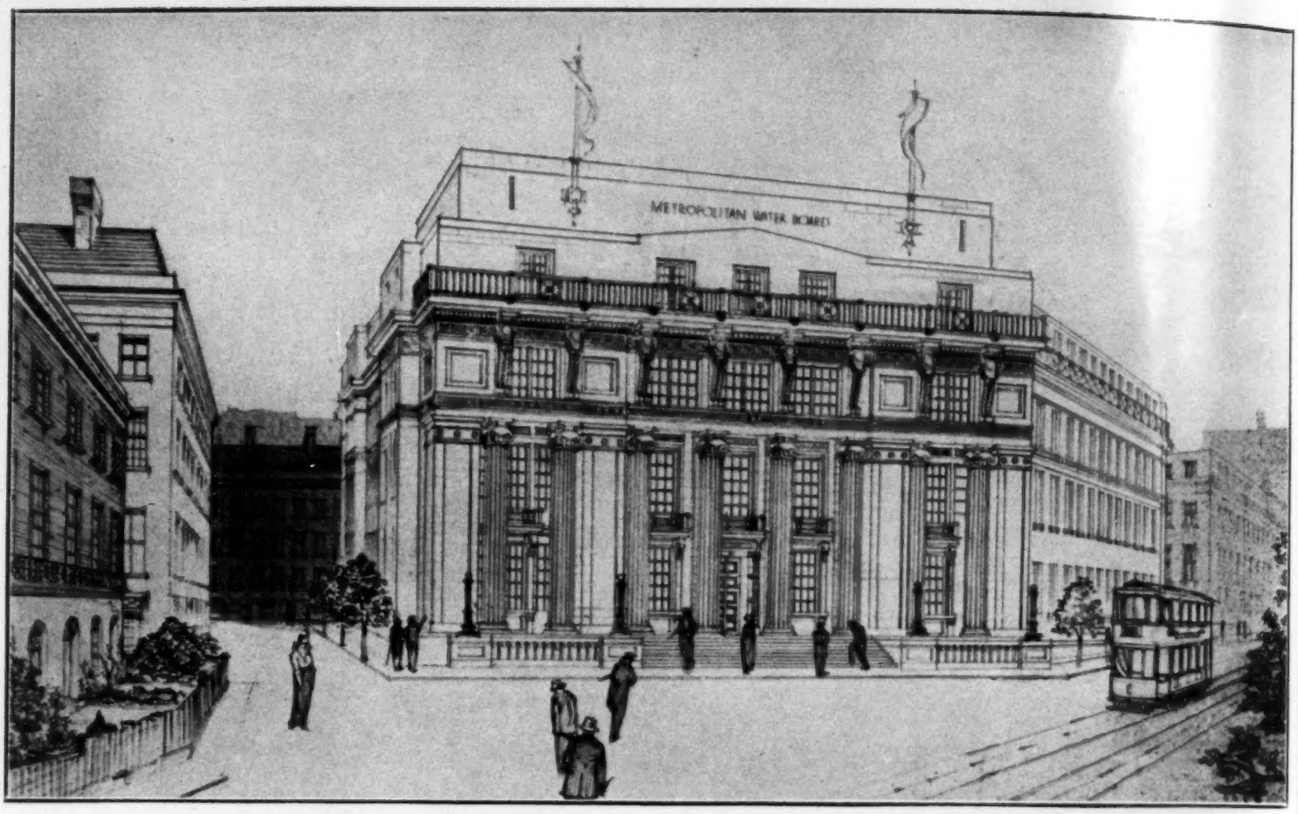
GROUND FLOOR PLAN.

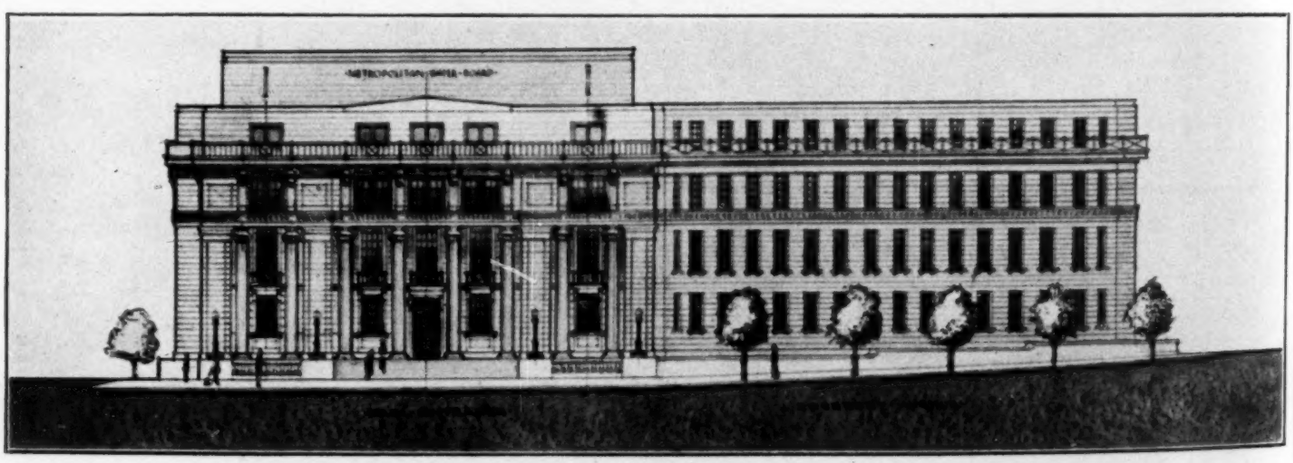


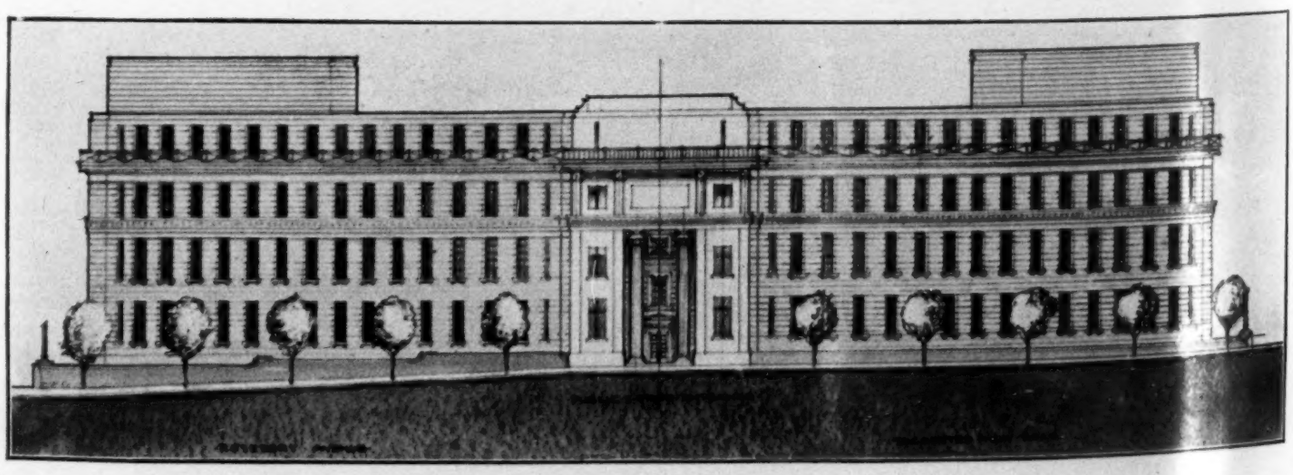
MEZZANINE FLOOR PLAN.

FIRST FLOOR PLAN.

METROPOLITAN WATER BOARD OFFICES.—Design by Mr. H. T. Hare, F.R.I.B.A., and Mr. H. S. East, A.R.I.B.A.







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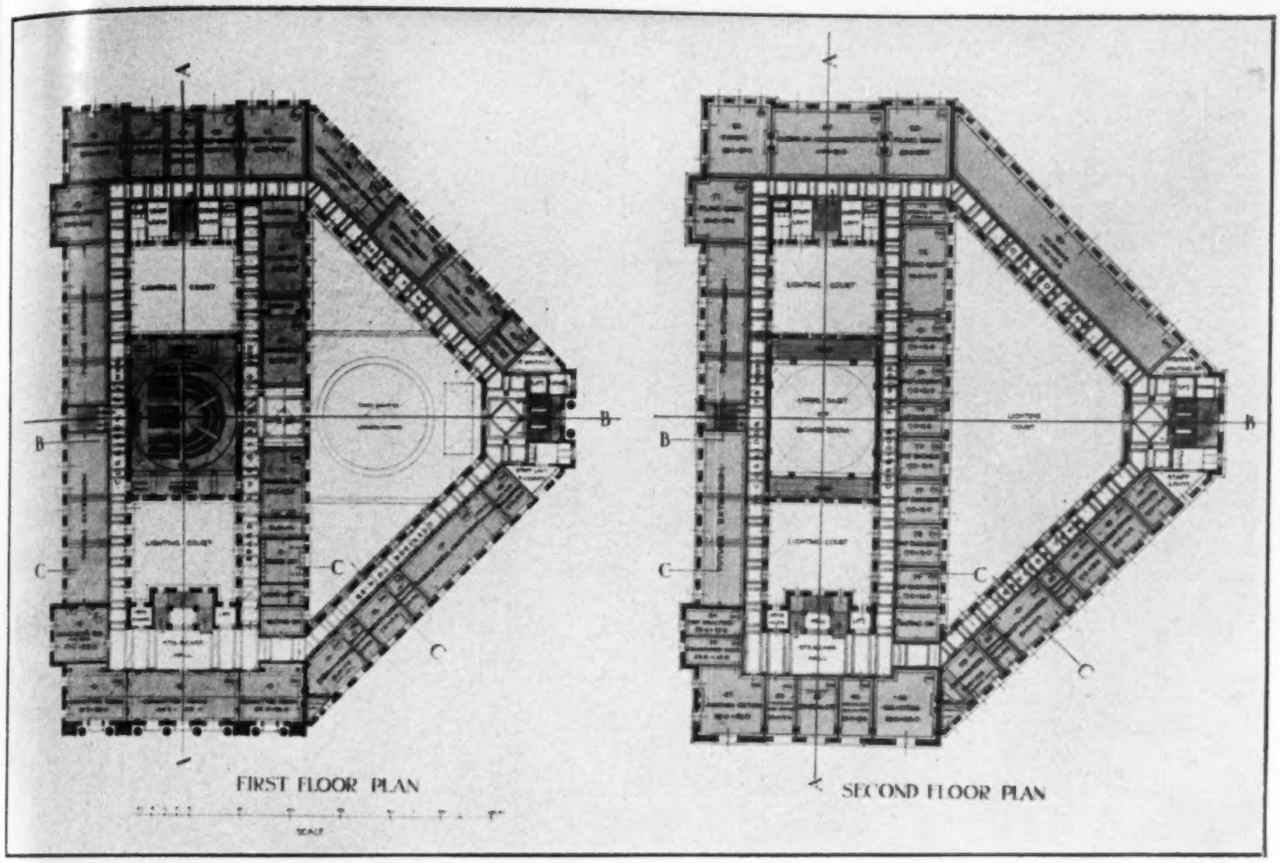

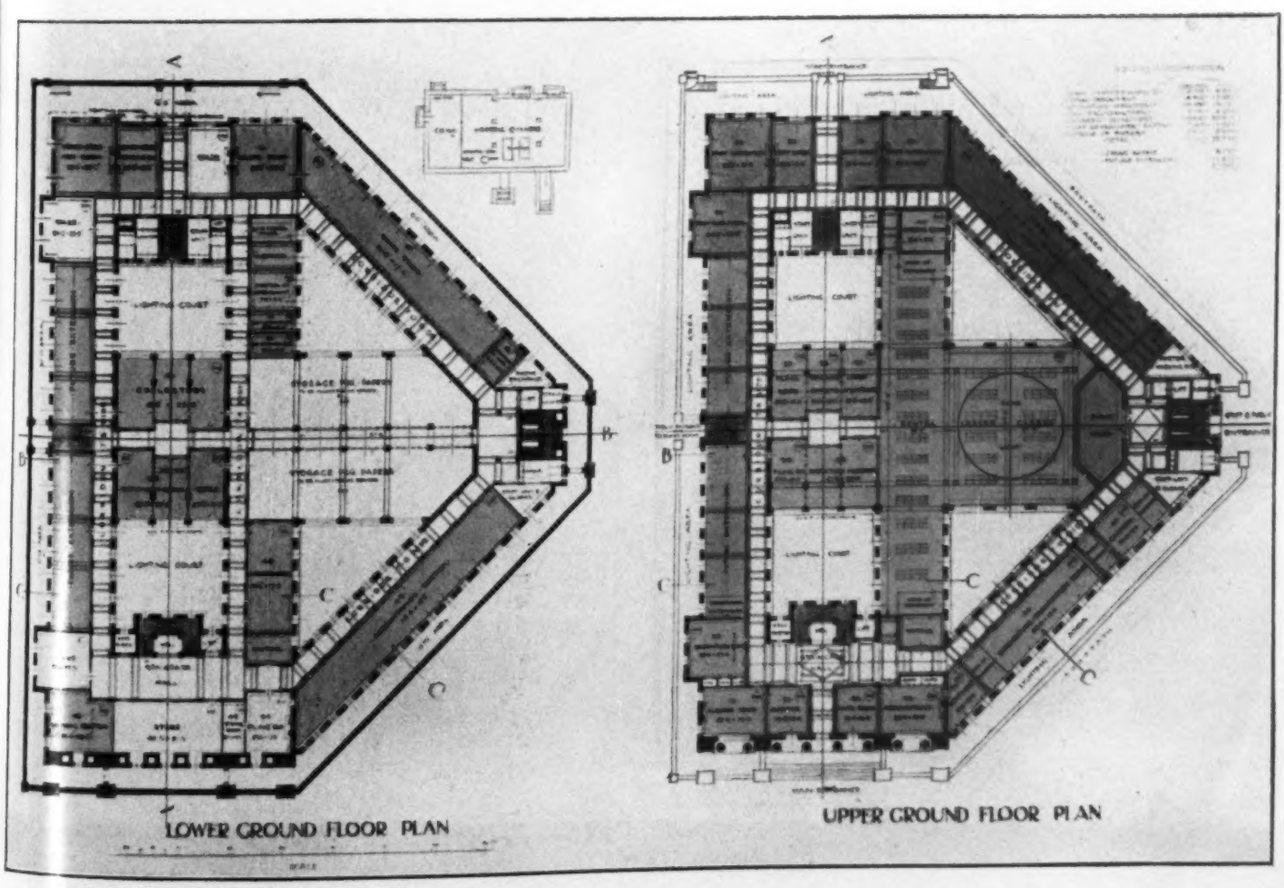

METROPOLITAN WATER BOARD OFFICES.—Design by Mr. T. Edwin Cooper, F.R.I.B.A.

LEGAL SECTION.

NOTES ON CURRENT CASES.

EXTRAORDINARY TRAFFIC:

Ledbury Rural District Council *v.* Lady Henry Somerset.

THE words "extraordinary traffic," in sect. 23 of the Highways and Locomotive (Amendment) Act, 1878, have unfortunately a somewhat sinister ring in the ears of members of the building trade. There have been too many occasions where what seemed at the onset a reasonable margin of profit has disappeared altogether by reason of claims in this respect by local authorities. The maxim that those who use the roads should pay for them has, it is true, the air of a self-evident proposition, but it is at least permissible to ask that the burden should be equally and fairly adjusted between the users. To what extent this is now the case is somewhat unpleasantly illustrated by the latest decision of the Courts on the subject. The facts were as follows:—The defendant, Lady Henry Somerset, is the owner of a stone quarry adjoining the main Ledbury and Tewkesbury road. Between the months of June, 1912, and May, 1913, stone from her quarry was carried along this road in trucks drawn by traction engines. The exact quantity of stone carried does not appear from the report, but there was an output from the quarry of 17,378 tons in the year 1912, and as the output was increasing year by year presumably not much less travelled over the road in the period of eleven months complained of. Other persons used the road in a similar manner, but the quantity of stone carried by the defendant was larger than that of any other person, and amounted to slightly more than half the total traffic passing on the road. The Ledbury Rural District Council claimed in the action £1,233, being the amount certified by their Surveyor as the extraordinary expense incurred by them in repairing the damage to their road, the claim being put forward on the ground that this damage was caused by "extraordinary traffic" conducted by the defendant within the meaning of sect. 23 of the Highways and Locomotive (Amendment) Act, 1878, as amended by sect. 12 of the Locomotive Act, 1898. Mr. Justice Lush, after stating the above facts and carefully considering the various cases already decided on the section above quoted, came to the conclusion that the traffic from Lady Henry Somerset's quarry was not "extraordinary," and that the local authority had therefore no right to recover.

Those who have paid heavy damages to highway authorities for carrying in a similar manner less than a twentieth part of the output of this quarry will perhaps wonder when they come to read this decision whether their eyes have deceived them as to the facts stated, or whether Mr. Justice Lush's decision heralds a change in the law indicating a better state of things for the trade generally. In neither case, however, will their doubts prove correct. The facts are as above. Mr. Justice Lush's decision involves no new principle of law. Indeed, if we may with submission say so, it is hard to see how on the existing cases his lordship could have arrived at any other decision.

To the layman—though this, unfortunately, is no reliable test—the wording of the section seems at first sight fairly clear. It runs as follows:—

"Where by the certificate of their Surveyor it appears to the authority which is liable—to repair any highway—that having regard to the average expense of repairing highways in the neighbourhood extraordinary expenses have been incurred by such authority in repairing such highway by reason of damage caused by excessive weight passing along the same, or extraordinary traffic thereon, such authority may recover from any person by or in consequence of whose order such weight or traffic has been conducted the amount of such expenses as may be proved to the satisfaction of the Court to have been incurred, etc."

In the case under consideration we have a certificate of the Surveyor for £1,233 stating that extraordinary expense to this amount had been incurred in mending the highway. Nor was it suggested that the Court was dissatisfied with the figure as excessive. It was clear, too, that the traffic which caused the damage was the defendant's, and took place by or in consequence of her order. The only remaining point is whether the traffic was extraordinary; and few practical persons acquainted with traffic problems would hesitate to affirm that the carriage of some 17,000 tons of stone in trucks drawn by traction engines, and constituting more than half the total traffic on a given road, was "extraordinary traffic." In the view of the present law, however, such traffic is ordinary only. This somewhat surprising result is attained by a reference of a practically compulsory nature to a series of prior decisions which, however much they may be criticised, nevertheless bind the discretion of the Courts until such time as a decision of the House of Lords or some statutory amendment of the law brings about a more equitable state of things. It has been decided, for instance, that where a road is adapted to the traffic complained of, and has been so used for a length of time, the traffic will not be held extraordinary, but ordinary, as it perhaps is, in the sense that it would then be traffic commonly met with on the road. (See Hemsworth Rural District Council *v.* Micklethwaite, 1904, 68 J.P., p. 345.) In the present case it was proved, in accordance with the requirements of this case, that it was an old and frequent practice to use the road for the traffic in question, though this was apparently the first time that the long-suffering local authority had taken action. Again, where the traffic belongs to a recognised local industry it has been decided that it cannot be called extraordinary. (See Wallington *v.* Hoskins, 1880, 6 Q.B.D. 206.) This, again, was the case here. No one disputed the fact that quarrying and the subsequent carriage of the stone quarried were local industries. Mr. Justice Lush was therefore bound by these authorities, and his judgment must be accepted for the time being as perfectly orthodox. At the same time, this aspect of the law operates very unjustly to the building trade. The builder does not have a chance of using the road for years until his traffic becomes "ordinary," and so does not obtain the protection afforded by the decision in the Hemsworth Rural District Council *v.* Micklethwaite. His use of the road is, on the contrary, occasional only, and for creating a less degree of nuisance than those who without interference use a road with heavy traffic persistently he, inconsistently enough, incurs heavy liabilities. (See Norfolk County Council *v.* Green, 1907, 90 L.T., p. 45.) Again, building is not, in the eye of the law, a recognised local industry or an industry peculiar to any particular place; the builder therefore obtains no advantage from the decision in Wallington *v.* Hoskins, above quoted, though but for his work there would probably be no local industries at all. Beyond this, his business frequently takes him away from the main roads, and his materials have to be carted over roads less stable than is ordinarily the case. Traffic then becomes "extraordinary" and falls within the grasp of the law, which would be deemed "ordinary" on a better and more expensively constructed road. Apart, too, from legal doctrines, as a stranger to the locality he constitutes a target at whom the authorities may safely shoot without distressing local feelings.

As a consequence of all these artificial legal refinements, and the casual nature of his work in any one district, the law which smiles approvingly at 17,000 tons of stone—more than half the total traffic of the road—being hauled from a quarry, frowns severely on the builder for moving 800 tons of material in a similar manner, and leaves him to compound with the claims of the highway authorities as best he can. It is perhaps not, therefore, to be wondered at that a strong feeling is growing in the trade that the time has now come for a more equal adjustment of these burdens. Nor is this feeling confined to trade circles alone. In the case of the Billericay Rural Council *v.* Poplar Guardians and Keeling (App., Vol. 80, L.J.K.B., p. 1,251), speaking of the legal doctrine above referred to, that "ordinary" traffic may become "extraordinary" in law if it takes place on a road where it is simply unusual, Lord Moulton made use, in giving judgment, of the following striking passage:—"I am glad that the admission of Counsel for the defendants has relieved this Court from defining what 'extraordinary traffic' is, because cases have been referred to which, at all events, raise the possibility that one would have been obliged to say that it had something to do with the past user of the road. I should be most reluctant to come to the conclusion that the legislature meant to penalise a person whose proper traffic only had made use of a road which lay useless before, and that the measure of his burden is the extent to which he had justified the existence of the road."

It is to be hoped, therefore, in the interest of the building trade that a test case as to what "extraordinary traffic" is may one day be carried to the House of Lords. Even if it fails in securing redress from their lordships, it will at least so stereotype and emphasise the existing anomalies of the law on the subject as to open a ready way for remedial legislation.

CONSTRUCTION OF COVENANT NOT TO ALTER ELEVATION OR ARCHITECTURAL DECORATION:

***In re* London County Council *v.* Weir; Joseph *v.* London County Council.**

This is an interesting decision as regards the effect of a usual covenant in leases in restraining a tenant from exhibiting an electric-light advertisement. Incidentally it involved important considerations on the wider question of preserving the architectural character of buildings.

The plaintiff, who was the assignee of a lease in the West-end, had covenanted with his landlords as follows, viz.:—

That he would not cut or maim any of the principal walls or timbers of the buildings for the time being on the ground hereby demised; or commit or permit any waste or damage to the said buildings or to the floors or timbers thereof; or make or permit to be made any alteration in the elevation of the buildings or in *the architectural decoration* thereof; or permit any steam-engine or furnace, or any additional building, chimney, or flue to be erected on the said demised premises; or use, exercise, carry on, or permit to be used, exercised, or carried on in any part of the said demised premises (*a*) Any dangerous, noxious, noisome, or offensive trade or business whatsoever; or (*b*) Any trade or business whereby the insurance against fire may be vitiated or lessened in value.

Whilst subject to these covenants the plaintiff installed on the façade of the premises an electric-light advertisement of O O Orkney Whiskey, Bovril, and Schweppe's Ginger Ale. It consisted of a framework of light iron bars forming a meshed net to which the letters of the advertisements were fixed. It was further supported by struts resting on the stone cornices of the building. These struts, however, were in no way fixed except to the woodwork of the windows. It was proved that the whole arrangement could be taken down in a very few minutes and removed without injury to the building. It appeared also that the advertisement did not relate to business in which the plaintiff was personally engaged. The London County Council contended that the covenants above set out clearly forbid structural alterations. They distinguished between this case and Bickmove and Dimmer, 1903, 1, Chancery, 158) by pointing out that in that case the covenants were not on all-fours with those to which the plaintiff was subject; further, they argued that in that case the advertisement referred to—a clock erected in front of a jeweller's shop—related to the tenant's own business, which was not the case in the present application. Mr. Justice Astbury, in giving judgment, addressed himself in the first place to the legal meaning of the words "elevation" and "alteration," and came to the conclusion that the word "elevation" means the front or side view of a building as distinguished from the horizontal or ground plan, and that the word "alteration" could not be used of things fixed to the premises for the purpose of using them in a reasonable way, and meant, in this case, the substitution of something different in the elevation or architectural decoration of the building which it was desired to preserve. He held that the question he really had to decide was whether the word

"alteration" was to be construed as an alteration of appearance or as an alteration of the fabric, and decided that it meant really an alteration of the fabric, and that an alteration of the appearance merely was not within the covenant.

It is obvious that this decision leaves a wide field open to the tenant, and that, as stated at the hearing of the case, there is nothing in his lordship's decision to prevent the plaintiff covering up the whole façade of the house with advertisement hoarding. Owners of property will therefore do well to take heed and protect themselves in future leases by more stringent covenants. It is, of course, clear that the object of the words "alteration in the architectural decoration" were intended to preserve the architectural character of the building having regard to the neighbourhood in which it was placed. Unfortunately for the County Council it is equally clear that the covenant has failed in its effect, and that so long as the plaintiff does not make any alteration in the actual stone of the façade it is open to him to more or less permanently cover it up. Mr. Justice Astbury appears to have come to this conclusion with some reluctance and to have been influenced by the fact that under any other decision there would have been some difficulty in saying at what point the word "alteration" was to stop. For instance, in the strict sense of the word a flower-box is an alteration if placed where no flower-box existed before. So also is a sun-blind. Covenants of this character are, too, of a penal character in that a valuable lease may be forfeited in event of their violation. It has, therefore, very justly always been the practice of the Courts to construe them strictly. At the same time in these progressive days, unless the ingenuity of the advertiser is curbed, it will be possible for tenants to convert the buildings they occupy to purposes very foreign to those which the ground landlord intended. Sun-blinds displaying brilliant advertisements and window-boxes inscribed with the virtues of patent medicines have, in more than one case, been threatened in addition to the flashing electrical signs which are now so common in our streets.

CLAIM FOR NEGLIGENCE AGAINST ARCHITECT AND ENGINEER:

The Secretary of State for War *v.* Messrs. Kirkland & Capper and J. H. T. Woodd.

This case, reported in our issues of the 1st and 8th ult., though it involved no new legal principle will nevertheless be of interest, especially to architects and surveyors, by reason of the responsibility attributed to the architect for the failure of some portion of the electric lighting at the New Army Medical College at Millbank. It is obvious, as stated by the judge, that it would be unjust to hold an architect liable for negligent dealings with scientific matter outside his sphere of knowledge. On the other hand, what a judge has to decide in cases of this kind is not what is abstract justice or injustice, but what the law requires having regard to the wording of the contract by which the parties have bound themselves and under which they are working. In this case the architect's position was found by the judge to have been affected in three ways. Firstly, he had, by his own architectural designs, rendered a particular system necessary; secondly, the wording of the contract specially provided that he should be responsible, *inter alia*, for the lighting and its proper supervision and execution, and the clause providing for scientific assistance contained no clause exonerating him; and, thirdly, his lordship held that the architect had shared in the pay.

The first and third grounds of the judge's decision applied only to the circumstances of the case, but so far as the decision was based on the wording of the contract, whilst its correctness cannot be questioned, it is nevertheless an injustice that an architect should ever have been asked to take responsibility for lighting systems as regards which he has no scientific knowledge. There may be, and, in fact, there frequently are, cases where the character of the building renders it in the highest degree inexpedient for the electrician to attempt to light it without the architect's advice and assistance; but surely that advice should not be deemed to make the architect liable for errors in the scientific portion of electrician's work, as was apparently to some extent the case here; and, at any rate, the contract should discriminate clearly between the divided responsibility.

Architects will do well in future to look carefully into their contracts where endeavours are made to saddle them with scientific responsibilities and see that it is clearly provided that they are not asked to incur liability beyond the legitimate bounds of their profession.

THE LEGAL POSITION OF TRADES UNIONS.

The Report of the decision of the Commercial Tribunal of Rouen contained in our issue of May 1 is of special interest at the present time. The recovery of damages by the members of a masters' union against a blackleg member who, contrary to his good faith to his fellow-members, has made a separate agreement with his work-people is wholly unknown to English law. It was at one time very much the fashion with a certain section of the public to say, in complaining of our insular shortcomings, "They manage these things better in France." Whether they do or whether they do not, so far as trade unions go, they appear, from the Report in question, to manage them very differently. In this country every masters' association, equally with every workmen's association, is wholly outside the pale of the Civil Law. To say that such associations have no rights would perhaps not be altogether correct. A large section of the public think they have too many. On either side they are free to libel, slander, boycott, and conspire to injure to their heart's content—and this without responsibility for damages in their character of associated bodies. So long as they keep outside the boundaries of the criminal law the association or union committee are safe. On the other hand, no union can recover a subscription or anything else from one of its own members or punish him for breach of faith, however gross its character. Surely of all the strange studies which demand the interest of the politician or historian that of our English labour legislation is the most curious. We have never succeeded in law in separating labour combinations from trade combinations at large. Because, in old times, when famines were constant, a corner in wheat was rightly deemed a grave offence, so it became equally unlawful for the labourer to corner his employer by combining with his fellows for a rise in wages. Either act was a criminal conspiracy against the State, and led very near to the gallows, if not actually there.

In this condition the law remained for centuries. Eventually the Legislature was compelled by public opinion to make a change. It first of all mitigated the penalties, and finally, in the seventies, exempted and freed masters' associations and workmen's unions alike from the criminal law. Civilly, however, it left both of them outlaws. The workman who pays a subscription to his union for the best part of his life, hoping to get a small pension when no longer able to work, may be arbitrarily deprived of it by the committee without possibility of legal redress. The employer who, after persuading his fellows to incur the losses of a prolonged strike, treacherously deserts them and makes terms with the strikers to secure some passing trade benefit can do so with impunity. No legal obligation of any kind exists in either case.

Towards the public some liability was still left. It was recognised by the judges that the mischief of leaving powerful bodies controlling large amounts of funds free to inflict as much injury as they pleased on each other and the public was likely to become an intolerable nuisance, and the Courts in several instances held that the moneys of such bodies could be attacked to answer for their misdeeds in the way of conspiracy to injure. This remaining responsibility was removed by the Trades Disputes Act of 1906.

The late Sir John Walton justified the introduction of the Bill on account of the danger of the benefit funds of the unions being attacked by way of damages. "Trade unions," he said, "are institutions which exist for the working classes. Their funds represent the hard-earned savings of a large and most worthy class of the community, and they have been contributed to a great extent for the purpose of making provision against misfortune."

On this idea the Bill went through. The employers' trade union, or masters' association, now enjoys the same freedom from legal trammel as the workmen's society. The last vestige of their legal responsibility to anything except the criminal law vanished from both at the same time.

It is a remarkable thing that, whilst our policy in this country has been as above, in other parts of the world the tendency is a contrary one. Legislation is encouraged to grapple with labour problems and to bring back employer and workman into the legal fold.

In some of our Colonies the Courts not only recognise masters' and workmen's unions, and invite their appearance before them, but deal with wages questions also.

Again, in Canada, where the latest labour legislation has been most favourably reported on by Sir George Askwith, no strike is allowed in any of the employments immediately affecting the public until the dispute has been exhaustively inquired into by an impartial State tribunal with all the powers of a Court of Justice, as regards evidence and witnesses. The system has hitherto worked well for both sides, and its adoption on a wider basis is now being urged. To come nearer home, as we have seen in France, an engagement to a union is a commercial contract enforceable in the same way as any other contract.

Indeed, in all parts of the world legal recognition of the status of labour associations, both of masters and men, is steadily growing. Are we alone the wisest of mankind in travelling as far as possible in a wholly contrary direction? There is no royal road to wisdom, and, at any rate, the position may well be examined.

Negotiation is often useless with a workmen's union, where no law compels the workman to obey his representatives' behests. From the workman's side the problem is equally difficult, where a section of outside employers refuses to act upon the agreements of a masters' union.

The justification for the immunity of the workmen's funds so eloquently pleaded by Sir John Walton no longer exists in a state of society where the Workmen's Compensation Act and Mr. Lloyd George's famous Insurance Act give the injured workman his annuity, and the sick or out-of-work workman his weekly payment, independently of the funds of his union.

At any rate, the day when the strike and lock-out pass out of existence as completely as the dodo will be a welcome one for the community; and the statesman who devotes his efforts to an examination of our labour system, with a view to a large measure of reconstructive legislation will not perhaps be amongst the least of those who deserve well of their country.

LAW REPORTS.

HIGH COURT OF JUSTICE.
(Before the OFFICIAL REFEREE, Mr. VEREY.)

Claim on Building Contract: Schroeder *v.* Rapson and Others.

IN this action Mrs. Clara Schroeder, wife of Mr. John Schroeder, of Ramsden, Billericay, sued the Rev. W. Marsh Rapson, of Gréve de Lecq, London-road, Isleworth, and other members of the Isleworth Mission Church Building Committee, for £230 15s., balance alleged to be due for work done and materials supplied in the erection of a new mission church at Isleworth.

By their defence the defendants pleaded that by contract between them and the plaintiff the latter agreed to do the work referred to in a certain specification and plans to the satisfaction of a Mr. H. Eydman; and, secondly, that it would be completed by December 4, 1912, subject to the forfeiture of £5 a week. They denied that the work was done to Mr. Eydman's satisfaction, or that it was completed by December 4, or that the work done was in accordance with the agreement.

Mr. Graham Mould and Mr. Pocock, instructed by Mr. William Corbett Goulding, of Finsbury-pavement, E.C., appeared for the plaintiff; and Mr. Oliver, instructed by Mr. L. Weston Wigg, of Chancery-lane, W.C., for the defendants.

Mr. Graham Mould said that the claim was to recover £230 15s., the balance due in respect of a building contract and extras in and about the erection of a mission church at Isleworth. The parties were Mrs. Clara Schroeder, the plaintiff, and the Rev. W. Marsh Rapson and others members of the Church Building Committee.

In answer to the Official Referee, Counsel said that Mrs. Schroeder undertook the contract for her husband.

Mr. Oliver (for the defendants): Mr. Schroeder is an undischarged bankrupt.

Mr. Mould: I don't know whether that is so.

Continuing his opening, Mr. Mould said that in August, 1912, the defendants were intending to erect a church, and got into communication with Mr. Schroeder. The latter suggested that a church building of concrete blocks

would be cheaper than brick, and more advantageous for a building of the kind intended. Mr. Rapson, who had had experience as an architect, went down to Mr. Schroeder's house, which was constructed of these blocks, and was well satisfied with what he saw. In October, 1912, the contract was entered into at the price of £380. The work was commenced shortly afterwards.

Counsel then read the correspondence in the case, and said that from the evidence it appeared that a Mr. Eydman was to act as surveyor. This Mr. Eydman was not, in fact, a surveyor, but was a builder. Counsel called the Official Referee's attention to a letter from Mr. Eydman to Mr. Schroeder, in which the writer said "he felt concerned at the quality" of the concrete used for filling up, and that when he went down to Isleworth he found that the men were "using nothing else but fine sifting matter." The letter concluded by pointing out that the builders had but one month to complete, and that unless the roof were on in fourteen days it was impossible to complete in the time, because of the rotten stuff used in filling up. There were other letters of a similar kind, said Counsel, but he desired to say that there was a perfectly good explanation of the statements made in them. That explanation was really that there was some confusion on the part of the architect between "navvy barrows" and "other barrows" the capacity of loading being different in each case.

He (Counsel) contended that the work was done all right, and he would call the evidence of Mr. Schroeder, of the men employed on the work, and of the Surveyor of the District Council, who passed the work, to prove that the materials used were perfectly proper and good, and that the concrete was mixed in proper proportions. The proportions were those in the specification, viz., of five or six to one, and never of nine or ten to one.

In answer to the Official Referee, Counsel said there were no replies to the letters he had read, for the simple reason that Mr. Schroeder was always on the job; Mr. Eydman was frequently there, too, and the Rev. Rapson, who lived in a little house just within the churchyard, took a still more active part than even Mr. Eydman.

The price was an extremely low one, said Counsel, but Mr. Schroeder had said he wanted to do the work partly as an advertisement for his concrete blocks. Was it likely, in those circumstances, that inferior material, such as was alleged here by the defendants, would have been used by Mr. Schroeder? The Barnes District Council sent their Surveyor to see the building, and they were so pleased with the concrete blocks that they ordered 1,800 ft. of river wall to be constructed for them by Mr. Schroeder of exactly the same material. That work Mr. Schroeder had since done, and there had been no complaint of any sort or kind. He would call Mr. Schroeder to say that he had been lately building model cottages for the well-known firm of Messrs. Cubitts. He had built two for them, and now had an order for sixteen more. Counsel then called attention to other letters raising complaints about the number of men employed on the work. In one letter Mr. Eydman had written: "There is great dissatisfaction at the way the work was being carried on. Two men and two lads only were there; and yet there was room for at least twenty men." Counsel said there were never less than eight men at any time, except sometimes early on Monday mornings, when some men, who lived at a distance, had not arrived; and the evidence would show that the complaints always referred to Monday mornings. The work was to have been completed on December 4, 1912, but a further three weeks were allowed for additions in the way of pilasters, etc. Mr. Schroeder made no charge for these, and so, though grace was given, Mr. Schroeder gave consideration by doing work without making any charge.

As to the complaint that the building had sunk in its foundations, he would call evidence to show that that was due to the treacherous nature of the soil itself, a matter over which Mr. Schroeder obviously had no control.

As to the thickness of the concrete used, Mr. Schroeder, though the specification only required him to put 1 ft. 6 in. on, put a minimum of 1 ft. 6 in all over, while in many places he put as much as 2 ft. 6 in., and even 3 ft.

At the close of the plaintiff's case, Mr. Oliver, for the defendants, said that he had sufficiently indicated his line of defence in cross-examining the witnesses for the plaintiff, and that he would therefore at once call his own witnesses.

The Rev. W. Marsh Rapson, one of the defendants, said that he had had three years' training as a draughtsman at Waterloo, had passed examinations in historic ornamentation work, and had had a course at the Bedford Art School. He offered to draw the plans for the mission church, and prepared them under the constant supervision of Mr. Eydman. He understood Mr. John Schroeder was the contractor. The latter told witness when he first saw him that he would do the building at a very low price. Witness consulted Mr. Eydman, who prepared specification and contract, and sent them to Mr. Schroeder.

After everything had been settled witness found for the first time that the blocks were 4½ in. and not 14 in. He protested, and said he had been misled, and Mr. Schroeder said he had made a mistake, knowing nothing of concrete blocks. Later, when the work was in hand, witness went and saw the excavations. Mr. Schroeder said there was a very good bottom. Witness saw cesspools there under the wall, where the second principal came. The site was the middle of an old slum area. It was bricked round and filled up solid. So witness saw that concrete was put in at the bottom of the excavations. Mr. Schroeder went deeper than the specification required close to the site of the old cesspool.

In answer to other questions, witness said that Mr. Schroeder was only allowed to go on if a guarantee were given that the walls would stand for six months from completion. Mr. Eydman said Mr. Schroeder would have to pull them down or go on and give a guarantee. Eventually this was waived by Mr. Schroeder giving ten supports free of charge, as specified. Mr. Schroeder at a later date asked if some old bricks could be put between the blocks, and witness, in ignorance, consented.

Witness denied that he ever said he wanted the level of the floor kept down as low as possible, or that more concrete blocks should be put on, or that he gave instructions for building the wall right up.

Cross-examined by Mr. Mould, witness said Mr. Eydman possessed more architectural knowledge than he. There were no quotations from any builders. When witness went to see Mr. Schroeder's house he saw cracks in the concrete; but Mr. Schroeder said they were due to inferior material. It shook witness's confidence in Mr. Schroeder when he found that the blocks were not to size. The concrete finally was no deeper than depth specified, except in one place. Witness thought the concrete bad and not worthy the name of concrete. He saw no bad concrete mixed himself. The sanitary authority passed the work. The sanitary authority's representative explained that as the Church Building Committee thoroughly trusted Mr. John Schroeder he was satisfied, because they would look after him.

Mr. Henry Eydman, contractor and builder, of Holly-road, Chiswick, in answer to Mr. Oliver, said he was asked to assist in preparing plans and to act as surveyor. Witness sent Mr. Rapson the draft specification. It was altered to suit concrete blocks. Later, witness submitted to the defendants' Committee an estimate of £506, as the cost of a brick church. That estimate included brick walls 14 in., with piers. Witness asked Mr. Schroeder if it was possible to carry out the work as shown on the plan for £380. Mr. Schroeder said it was, and that £380 was the net cost price, and that he wanted the advertisement. In answer to other questions, witness said the land was perfectly dry, and there were no loose parts in the maiden earth. Witness noticed that the principals were out of the vertical at least 5 in. The purlins and rafters were on slate and battens. Witness repeatedly complained, and the plaintiff's workmen then cut through and forced the principal through 5 in.; that produced a bumble back.

Cross-examined, witness said he was competent to act as surveyor. Witness told Mr. Schroeder he would not give a certificate. Witness did not rely on Mr. Rapson's attendance at all. On an average witness was on the spot twice a week.

Mr. J. G. Carey, District Surveyor of Heston, Isleworth, giving evidence, said that if he had had the power under the specification he would have notified the builder and brought someone else on the job to put the matter right.

Mr. Biggs, F.R.I.B.A., giving evidence for the defendants, said there was even now too much weight on the walls. Slurry had spoilt the effect of the blocks; he would remove it, if possible, with wire brushes. There was a serious crack at the western end, which, though not highly dangerous, was not safe. The crack went right through; it was not a result of settlement in the concrete under the walls, and did not go 6 in. below the surface of the ground. A hole was opened recently, and witness saw concrete 1 ft. 9 in. chiefly of half bricks. The projection was 5 in. beyond concrete cast block.

At the close of the evidence and Counsel's speeches the Official Referee reserved judgment.

The Official Referee, on Tuesday, delivered judgment for the plaintiff on the claim for £197 9s., with costs, and also judgment on the counterclaim, with costs.

In the course of the judgment he said that the case had occupied a long time, but he had had the advantage of viewing the premises in arriving at his judgment.

Mrs. Schroeder had agreed to execute the work for £380, and had also agreed that it should be done under the supervision of Mr. Eydman, a builder of experience. She had been paid £258, and now claimed the balance due under the contract, together with certain extras, making a total of £235 15s. The defendants alleged that the work was not completed, and that the plaintiff had been overpaid.

There was a conflict of verbal evidence which was not remarkable considering that these matters took place in the autumn of 1912, and therefore he had especially to consider what was written about that time. Without going into detail, he was going to state the main conclusions at which he had arrived.

As regarded the plaintiff's claim for the balance of work done under the contract, the plaintiff was entitled to what she claimed, subject to deduction for work omitted or defective. Mr. Eydman was constantly on the job, and Mr. Rapson—the expression "clerk of the works" was somewhat too complimentary to him—also took a great deal of interest in the the work.

The first complaint in writing prior to February 5, 1913, was on November 6, in a letter of Mr. Eydman's, which related to the falling of the ceiling. That matter was settled by putting in additional supports. Some other complaints were made on December 31, which also were settled.

During the whole of January Mr. Eydman made no complaint, although there were several letters from him. By Condition 8 of the contract, Mr. Eydman had power to order the removal of unsatisfactory materials; nevertheless, he had never given any such order.

Taking the items of the defence *seriatim*, the Official Referee found as to the slating of the roof that it was not proved that the defect was due to the plaintiff's fault. The verge was a trifling matter, and 3s. 6d. would be a sufficient deduction upon that head. As to the blocks, there was no proof that they were "green," and in any event Mr. Eydman saw them. He found that the eaves gutter was not defective. Then as to the matchboarding, which was considered by defendants to be contrary to specification, Mr. Eydman should have ordered its removal if he did not approve of it. Instead of doing so, Mr. Eydman had allowed it to be used. As to the wood-block flooring, Mr. Eydman said that he had complained about the concrete; but the written notes produced by Mr. Eydman contained no mention of the flooring until January 30, when they merely called attention to the floor without saying that the concrete was bad or that Mr. Schroeder had refused to make it good; and in a letter of January 27 Mr. Eydman was to be found asking Mr. Schroeder to push on with the work. He (the learned Official Referee) found as to the floor that Mr. Eydman allowed the concrete to be laid without objection, and passed the concrete. The wood floor was laid hurriedly and damage was done to it by reason of persons walking on it where it was defective.

The Official Referee referred to Mr. Schroeder's offer to make good any defective portion of the floor, and said that, in his opinion, £5 would be a fair deduction on that head. As to the curb to the platform, that was so trifling a matter that 2s. would be a fair deduction to make. As to item No. 9, he found that the cracks were caused by a stove, and therefore, as he found that as a fact, plaintiff was not responsible for them. The omission of the soot doors in item No. 10 was an omission in obedience to instructions. He would allow 2s. for plastering the water-closet and 1s. in respect of the non-throating of the sills; but, as there was no proof that the matchboarding there was not finished according to specification, there could be no deduction upon that head. As to item No. 14, he found that the gullies were proper gullies. As to No. 15, he found that it was not specified that the water waste-preventer should be painted, but at the same time he would allow 1s. upon that head.

As to the blocks, the learned Referee found that there was considerable evidence in support of the view that a settlement had taken place under the foundations.

The total amount for deduction would be £6 from the contract sum of £380, bringing the amount due under the contract to £374. As to extras, he found that the plaintiff was entitled to £81 9s. He also found that a condition as to ordering extras in writing had been waived.

(Continued on page 683.)

THE BUILDING TRADE.

THE LONDON BUILDING DISPUTE:

FROM THE WORKMAN'S STANDPOINT.

[We have received the following article from an operative stonemason, and we print his communication, as we think our readers would like to know more fully the views of the workmen engaged in this dispute.—ED.]

IT is questionable if there has been any period in the industrial history of this country when so much unrest has existed as during the last three years. Many reasons have been advanced as to the cause, but without a doubt the increasing cost of living which has tended to depress the workers' lives, coupled with the knowledge that the wealth of this country is continually on the increase, the worker not having a proper share in the same—these facts have tended to accentuate the unrest. But the increased educational facilities extended to the working classes are beginning to bear fruit in the direction of shaping the mind of the worker towards a clearer understanding of the social and economic forces which operate to make up the system under which he exists; consequently he is becoming more sensitive to the inequalities that obtain. The worker is not prepared to accept things as they are; he is out for more opportunities, and is bent upon having a more equal distribution of the wealth which the industrious portion of the community produce. Some do not particularly welcome these signs. This attitude is altogether wrong. Preconceived notions and minds dominated by prejudice will not assist a peaceful solution of the problem, but may retard, irritate, and gradually foster elements of a violent character that no sane and well-intentioned person desires. The working classes are out to secure better conditions (and rightly so), and, in spite of all, they are determined to have them. In face of these facts it behoves every section of society to bend to the situation and assist by every means possible in wisely directing such efforts through peaceful channels. One is impressed with the idea that if broader and more reasonable counsels had dominated the situation prior to the lock-out in January last, then this unfortunate and lengthy conflict in the London building industry could have been avoided. It is a matter for regret that the militant section in the London Master Builders' Association ranks and of the operatives' section ruled, to the detriment of all. However, it may be the means of shaping a line of policy which will be more rational and effective in securing better and more peaceful relations between master builders and the trades unions.

The chief complaint of the London Master Builders' Association was that the unions had been guilty of infringing agreements. Frankly, this charge is sustained. The attitude taken up by some of the unions concerned, that they were not responsible for the acts of their members relative to such agreements, was ridiculous. Fancy representatives in the name of their members seeking and signing rules on their behalf, leaving such members with no sense of individual responsibility! This is not trades unionism; it is the reverse; and, moreover, it is not honourable. It will be a sorry day for trades union principles if such doctrines find favour; but there is little fear of such. It is held (and rightly so) that agreements between employers and employed as a result of collective bargaining are the foundation of trades unionism. One effect of this conflict is that the air has been cleared of the mist which brought it into being. There will be a more rigid observance of local rules agreed upon in the future. But in this regard we expect employers also to carry out agreements, not only in the letter but in the spirit, as they are not all the Simons-pure, judged from this standpoint, than in the case of many of the fair employers in London. It is more the fault of foremen and managers that transgressions obtain.

But it is held by the workmen that extenuating circumstances contributed to their breaking rules. To those fully conversant with the policy of the London Master Builders' Association this plea can be borne out. Take their attitude towards the labourers. For years they declined to enter into agreements with them on the ground of the number of unions catering for the same. But this did not present difficulties impossible of overcoming. Other centres have similar conditions, but have not prevented agreements. It was only last year the London Master Builders' Association tardily conceded rules to them. Even then they degraded the labourers by withholding overtime rates the same as other sections have. In this regard the opinion is held that the policy of the London Master Builders' Association was dictated with a desire to take advantage of the bottom dog. This did not gain the confidence of the labourers, but rather tended to irritate. Again, their relations with the painters have not been conducive of good relations. It is hoped the London Master Builders' Association will tackle the grievances of these two sections in a broad-minded way. It would go a long way to bring about more amicable relations.

By far the most important issue remaining in this dispute is that relating to the non-unionists. The trades unionists claim freedom to exercise any power, after persuasion has failed, to compel a man to pay to the union catering to his trade. The London Master Builders' Association, on the other hand, insist upon restricting our freedom in this regard. On the face of it the claim of the trades unionist to compel a man to pay to a union against his desire appears to be an undue interference with the liberty of the subject, but we claim there is every justification for such action. The activities of the State and our various local governing bodies in this country are in the common interests of all; in return, each citizen is compelled to pay their quota of taxes and rates. We appreciate the danger in claiming the same right of action as the State; but every man working at a trade where, through collective bargaining of a union, his standard rates of wages, hours of labour, and other conditions are improved, we claim it is the duty of every man to pay. Does the non-unionist refuse to pay on account of his objection to trades unions? Well, we find he does not carry his objection to the point of declining the benefits which are the result of trades union action. Hence we fail to find any evidence of high principles governing his attitude. The action of this type of individual is animated by mean or stupid and frivolous sentiments. We think he is lacking in moral character. The non-unionist never appeals to the London Master Builders' Association for improved conditions, but he is as eager as his fellow-worker (who by paying to his union is the means of getting such) to receive such improvements. The employers in taking this type under their protective influence are shielding the worst characters in the human race.

But the London Master Builders' Association may argue that they aim at restricting our freedom to deal with the non-unionists on the ground that they wish to avoid friction and dislocation of business through the risk of disputes on the matter. The members of their Association have a right to expect some degree of guarantee for the peaceful working of their business as a result of agreements arrived at between the employer and employed. But the policy of the London Master Builders' Association has not secured it. Since the rule in question, being inserted in London agreements, there have been more disputes on the question of non-unionists than previously. Again, in the great provincial centres the rules agreed upon between trades unions and employers have no reference to this matter, yet it will be found that the provinces during the last two years have had a much less percentage of disputes on the question of non-unionists than London. The reason for this is that the workmen in London are worked up to a keener and more bitter spirit because the non-unionist continually taunts the unionist that his employer is out to protect him. Your readers can imagine the passions aroused in such an atmosphere. We also have held the opinion that the London Master Builders' Association have adopted the policy of restriction with a view to weaken the unions; also, when we see their efforts to limit our efforts on ticket inspection and the threat that no trades unionist should be a foreman, these are pin-pricks irritating to our members, and without a doubt have incited them to throw over the traces, and, as a result, infringement of agreements which no sane trade is out to encourage, seeing the policy of restriction does not achieve the object they have in view. Why does not the London Master Builders' Association give up that which is not conducive to the peaceful working of agreements? It is suggested the trade unions are out to bar the non-unionist from earning his living at his trade. Anyone conversant with the matter knows this is not so. The non-unionist is not such a self-sacrificing person as to forego his job because he is called upon to pay to the trades union. Facts show that few leave their job on this account.

The recognition of the London Building Industries Federation is strongly opposed by the London Master Builders' Association. It has been stated frequently that a uniform agreement with all sections would give greater guarantee for keeping agreements. It needs no large amount of insight to see there is a deal of force at the back of this argument. The London Master Builders' Association represents the common interest of employers in the building trades. On what grounds do they object to one authority for the operatives to negotiate and supervise agreements?

A review of the situation at the present time gives rise to much speculation. After nineteen weeks the operatives are as determined as ever. Within three weeks they have rejected two sets of proposals for settlement of the dispute. The stern manner of the men must have revealed to the employers a temper they never anticipated. But at the same time there is sufficient evidence that both sides are prepared to come to terms of settlement, but the prospects of agreement are not bright. The more the elements are analysed the firmer the opinion is held that some third party must settle this unfortunate dispute. It must not be assumed that there is any extreme bitterness of feeling between the disputants; in fact, considering the lengthy period of the fight, both sections are to be congratulated upon their present relations. But in both camps there is, as pointed out, a marked divergence of view on a particular point. The only third course the London Master Builders' Association appear to favour is in the nature of a general lock-out of the building trades. The operatives have no desire for such, and it is very doubtful if the provincial builder looks with favour upon this proposal. Their relations with the trades unions are generally good. Through the peaceful operations of the National Conciliation Boards differences have, been and now are being, adjusted without resorting to the evil effects of strikes. The policy of London has been to stand aloof from these peaceful channels. Result—conflict. In face of these facts can the two disputants expect an appeal made to the provinces to become involved being favourably received? The employers and employed in the provinces have displayed more foresight and a broader outlook than in London, and consequently are reaping more beneficial results.

London has had its distinct policy, and now has its distinct problem to solve; it would be a crime to rush into a national conflict and upset good relations and cause dislocation of trade. There is no common interest involved. Let each party take a common-sense view of the position. The national lock-out would produce an extension of the insane fight now in progress in London. Would it solve the difficulty? There is no guarantee of such. If a third party is to be brought in, then why not the National Conciliation Board? In face of the London situation, and if national action is threatened, the executives of the unions involved will undoubtedly appear on the scene, and the London problem will become a national one for settlement. The very best interests of all will be served if immediate steps are taken to approach the National Federated Builders and say that the men shall return to work at once, and all points in dispute to be referred to the National Conciliation Board. This way is

peace, and, if accepted, will show confidence in reasonable counsels prevailing rather than an extension of conflict, with the prospect of certain evils attending and an outcome which none can forecast.

A LONDON BUILDER'S EXPERIENCES OF SANITARY OFFICIALS.

In the course of a paper delivered at the Institute of Sanitary Engineers on April 20, on "A London Builder's Experiences with Sanitary Officials in the Metropolis," Mr. Guy B. Grave said:—

"In preparing this paper my object was to bring before the notice of my fellow-members (particularly those interested, as I am, in the execution of drainage and sanitary work as applied to private house property) some of the difficulties which arise in connection with this class of work owing to the lack of uniformity of practice adopted by sanitary departments of some of our Metropolitan Borough Councils.

The divergent views held by medical officers of health and sanitary officers as to their legal powers under the various Acts of Parliament, etc., now in force, in my opinion, sometimes cause a serious hindrance to the expeditious carrying out of work one may have in hand.

I will very briefly attempt to summarise the various Acts of Parliament and other measures which have at times been passed for the purpose of improving the general sanitary condition of London, and if I should happen to make a slip or two in this connection I will ask your indulgence and forgiveness for such errors, pleading as my excuse that I am not a lawyer nor am I particularly well versed in legal enactments, but am just an ordinary individual who chafes at times under the overbearing manner and arbitrary officialism of some of the public officials with whom I am brought into contact.

I believe that the first serious attempt at legislation in respect to sanitation and drainage, as applied to house property generally, is the Metropolis Management Act, 1855, an Act which undoubtedly gave great powers to the bodies who had to administer it. This Act was followed by various others; some of these dealing almost exclusively with sewers, need not be considered, as they do not come within the scope of this paper. When, however, we look at the Public Health (London) Act, 1891, we see that still greater powers were given to the sanitary authorities. Upon the passing of the London Government Act, 1899, the now existing Borough Councils came into being. To these new bodies were transferred, I believe, all the powers relating to sanitation possessed by the Vestries and District Boards which previously held the field. Then, also in 1899, another Act—the Metropolis Amendment Act—was passed, which conferred upon the London County Council the power to make by-laws in connection with the construction, reconstruction, or alteration of pipes and drains communicating with sewers, or the traps and apparatus connected thereto, together with plans and notices relating to the foregoing. This last Act was followed in 1901 and 1903 by the by-laws now well known to all who have anything to do with drainage and sanitation in the County of London.

The Metropolis Management Act, 1855, was, I should say, a much-needed measure. From what I have heard and read, the sanitary condition of London previous to this Act was deplorable. All will, I think, agree that the Act of 1855 was necessary and perhaps long overdue. This Act was the only guide to the officials for a great number of years, and, as may be supposed, many and various were the ideas which prevailed amongst sanitary officers as to the best and most correct method of draining a town house and fixing water-closets, baths, sinks, etc. The most important legislation were the by-laws of 1901 and 1903, made by the London County Council, and adopted generally by the various Borough Councils throughout London. The 1901 by-laws were enacted owing to the lack of uniformity in sanitary practice in the metropolis, and aimed as installing a more general and uniform method of laying drains and fixing pipes and fittings. Those of 1903 dealt with the question of applications, deposit of plans, and urgency.

I have always held the opinion that these by-laws were made for the amplification of the Act under sect. 202; and, as I have before stated, their chief aim was uniformity of practice, this view being held by Mr. Jensen and expressed in the Preface to that splendid little work of his dealing with the subject. But instead of the Sanitary Inspector taking these by-laws as his guide and authority I have been told by a Sanitary Inspector that his Department had taken counsel's opinion, and held the view that their powers went beyond these regulations—they merely represented the least they could ask for!—whilst another official has, to my knowledge, seriously expressed the opinion that he could demand that a silver soil pipe should be fixed if he deemed it necessary, giving as his authority sect. 76 of the 1855 Act.

And now for a few personal experiences as to how the by-laws are sometimes administered. It has been seriously suggested that a gravelled path is a paved surface, and as such must be drained by means of a trapped gulley and a drain constructed in all respects as one intended to convey soil and contaminated matter. Enlarging upon this subject, I was staggered when I learn that the paths surrounding a garden may not be drained by means of 4-in. earthenware pipes jointed with cement and with trapless gullies connected thereto at intervals, the whole discharging above the water-seal of a gulley which took the surface water of a small area and was properly connected to a manhole. No; the aforesaid gullies must all be trapped, and the head of the garden drain must be ventilated by means of an up-cast shaft exactly as in the construction of a soil drain! The above matters came up in regard to work being executed in one of the Metropolitan Boroughs. In another Borough the exact opposite has been held; and, not only so, but the feet of rainwater pipes were connected to earthenware shoes, which were branched into a drain emptying above the water-seal of a trap; in this case no ventilating pipe was even suggested to me.

While speaking of draining paved spaces I should like to describe one case which came under my notice. A small area of about 3 ft. by 1 ft. outside a window had a paved surface. This area was more than covered by a projecting landing beneath the window immediately above. I was told by both the Chief and the District Sanitary Inspectors that I must drain this area, notwithstanding the fact that the refuse in the area—consisting of leaves and dust—was bone-dry, in spite of some recent very rainy weather. To do so would have meant laying about 24 ft. run of drain averaging about 4 ft. deep. I collected the refuse in the presence of witnesses, told the Chief Inspector I had done so, pointed out to him what I considered the absurdity of his request, hinted at possible danger to health due to the evaporation of the contents of the gulley which would then form a ventilating opening to the drain immediately beneath a window, and asked him what new regulations had been passed since a similar area was left undrained in 1903. When he suggested that his Committee would probably take some steps to enforce the work he had suggested I asked him to waive all unnecessary preliminaries and let me have the summons at once. I never received it!

I was, upon one occasion, a good deal annoyed, but at the same time much amused, by a request made to me by an inspector regarding the by-law relating to concrete under drain-pipes. I ought to tell you that the inspector was acting for a colleague who was away upon his holiday. The drain was of 4-in. stoneware outside the house, and laid upon 6 in. of cement concrete, 18 in. in width, and properly benched up half its diameter. The water test had been applied, and all was sound and ready for filling in when the official made his request, this being that in order to comply with the by-laws we should embed the drain pipes in concrete, so that they would be covered with a layer of this material equal in thickness to not less than half the diameter of the pipe. I was inclined at first to treat this suggestion as a joke, but the inspector was quite serious, and during the discussion which ensued he told me that this question was now receiving the consideration of Sanitary Inspectors. But, he added, of course, if the medical officer was satisfied with the hitherto accepted meaning of the by-law he had nothing more to say. I hardly need say that the medical officer was satisfied, and the drain, without its 2-in. covering of concrete, was duly passed.

I have been up against it also with respect to bath and lavatory waste-pipes, and here, as in many other instances, I contend that sanitary officials can do their work and see that by-laws and regulations are enforced without being arbitrary, unreasonable, and arrogant. I was, during 1911, entrusted with the drainage and sanitary work at a house, and in due time prepared a plan and sent it in duplicate to the medical officer, together with applications and particulars. After consultation with an inspector on the premises one or two modifications were made. Upon his next visit to the job a length of 2-in. rain-water pipe had been temporarily placed in a position where it was to be fixed as a bath and lavatory waste-pipe, and, acting upon my instructions, the foreman of the job called the inspector's attention to this pipe as being the kind I was fixing. "That won't do!" said the inspector. "It must be of heavy London County Council pipe." I may say that in my particulars I had specified 2-in. cast-iron pipe of weight and quality known as "rain-water," and to be jointed with red-lead. The by-laws are, in my opinion, very clear on this matter; see Clause 10, 1901. Here we read that:—"Every pipe in such building for carrying waste water from every lavatory or sink (not being a slop-sink or urinal constructed or adapted to be used for receiving any solid or liquid excremental filth) to a sewer, to be constructed of lead, iron, or stoneware." Here, you see, one has the choice of three materials; nothing is said as to sizes and weights. Such was my contention; but my friends the officials argued otherwise, their idea being that the sanitary engineer and the builder has no say in the matter, they alone deciding what material may be used. I asked by what by-law they considered they were given the power, and was told they went beyond the by-laws, to the Act of 1855, which gave them that power. Needless to say, I attempted to argue the matter with the inspector, and finally told him that I intended to fix the rain-water pipe as a waste-pipe, and did so, after having suffered a good deal of delay in the progress of the work. The approval of my plan and details with the pipe as fixed ultimately came along. At a later period—last year, in fact—this waste-pipe again became a bone of contention. My client wished to have a sink fixed in the room above the bath, and I informed the medical officer that I was doing this, detailing that it would be trapped and ventilated and connected the existing light iron waste-pipe. Then the fun commenced. In acknowledging my letter the medical officer told me that I must deposit the necessary plan and forms for the Committee to consider before proceeding with the work. This was on July 5. I was told upon the telephone next day that the Chief Inspector said it would be necessary to connect the sink to a heavy iron waste-pipe. I reminded this official that the existing pipe was fixed and passed by him in 1911; he replied it was fixed whilst the Council were in recess. I did not retaliate as I might have done by asking why the responsible officials then connived at a contravention of the by-laws. I then sent plans and particulars, and wrote at length to the Medical Officer of Health, telling him I could not agree to the Chief Inspector's request as to a heavy pipe being substituted for the existing sound-pipe, and asked that, as it was a matter of urgency, he should without prejudice have the fixing of the sink and its connections examined, leaving the matter of the pipe to be settled later when the opinion of the Committee was known, adding we should feel obliged and it would be interesting to know under what Act and section the heavy pipe was asked for. I received a lengthy reply telling me that there was little doubt that I knew the answers to all the questions I had asked, but chapter and verse were given, viz.:—"The statute and section governing the composition, material, form, and workmanship of drains and their branches is the Metropolis Management Act, 1855, sect. 76, which gives the sanitary authority the right to determine the description of the pipe." The remainder of the letter is very interesting, and I give it in full:—"I would like to emphasise in this matter the fact that you have not been asked officially to substitute one pipe for another at all. I understand that the substitution of a heavy pipe for a light one was suggested to you by the Senior Sanitary Inspector; and he was right, because it would have been better workmanship and more in conformity with the by-laws in force in this borough. The people, however, who determine this matter are the Committee before whom your plans come. They decide upon your plans and application, but they cannot decide upon an urgency

notice, only upon the plans as demanded by the by-laws. I think it possible—nay, even probable—that they will pass the plan that you have just submitted, but should they do so I consider it would be an unfair statement to make that because they pass a plan with light iron pipes in one case it should be construed as a precedent and used against them at any future time.

"Your plans will be laid before the Committee on Tuesday evening next, and you will be acquainted in due course with the decision at which they arrive."

Then came a letter in which I was informed that my application had not been approved by the Public Health Committee on the grounds that the waste-pipe was shown to be of light iron, and I was invited to call at the office and amend my plan and application. The sink had already been fixed and the job completed seven days previously, but no one had been to examine the work. I did not accept the invitation, and on October 4 I received the news that my "application had been approved by the Council."

No doubt many of you have experienced similar difficulties, and we shall continue to do so while the officials arrogate to themselves powers which I for one contend they do not possess. This statement is, I venture to say, fully borne out by what I have previously said with regard to the bath waste-pipe. Here an inspector made a certain request; it was backed up by the medical officer and Public Health Committee, all of whom ignored the by-laws entirely, and in doing so exceeded their legal powers, as was proved by their not enforcing their demand.

I have heard it said by a builder of repute that in one district he approaches the Public Health Department with trepidation every time he has a job in their borough, feeling sure that whatever plan and method he submits will meet with adverse criticism, accompanied by harassing and overbearing suggestions.

Surely it would be better to allow a small voluntary work of improvement to be made to a house, such as replacing a defective or out-of-date water-closet apparatus with one of better construction, than to place an embargo upon such work owing to the fear that if this particular water-closet is fixed an entire system of new drainage may result from the action taken by the authorities. I am not by any means advocating the retention of insanitary fittings and unsound drainage, but most of us, I take it, agree that the opposite view, when carried to an extreme, as it sometimes is, is unreasonable, vexatious, and arbitrary. I do not quarrel with sanitary officials demanding that the by-laws should be complied with, but what I do object to is the attitude of bluff which some of them adopt in the enforcement, where they can, of regulations and practices in force in their particular borough not always in accordance with the by-laws.

I do not ask for a lowering of the standard of work, and it is just possible that any agitation set afoot may have a similar result to the one I will now quote. A certain section of clerks in a Borough Council's employ objected to having to work longer hours than some of their colleagues, and so sent a round robin to the Chief, asking that their hours should be reduced. It produced the opposite effect. The petitioners' hours remained the same, while their colleagues previously better situated found their hours lengthened as a result of the round robin."

TRADES UNIONS AS CONTRACTORS.

UNDER this heading a paragraph appeared in the *Times* on Wednesday, and similar notices have appeared in most other papers. The suggestion is that some new departure has been made which does away with the legitimate contractor.

There is, however, nothing new about what has happened. It simply amounts to this, that the Theosophical Society are acting as their own contractors and in that capacity have placed themselves under the thumb of the London Building Industries Federation by subscribing to its condition that only trades union members shall be employed in, on, or about the building or upon any work destined to form part of it. On these conditions the Building Industries Federation graciously undertakes to supply labour.

Every builder in London could enjoy the same privilege to-morrow if he was willing to abdicate his right to be master in his own business.

Fortunately for the public welfare there is enough unregenerate human nature left among the contractors of London to make them prefer to shut down their businesses, as they have done for nearly twenty weeks, rather than hand over their work to the control of the Syndicalist element in the trade unions—an element which openly flouts all agreements and indeed does not want them.

The so-called contract with the London Building Industries Federation has no legal sanction behind it, and depends, as did those working-rule agreements the breach of which is responsible for the present dispute, upon the good faith and honour of the parties to it. Will it be any more faithfully observed? We wonder!

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ARDSLEY.—Plans passed by U.D.C.:—House and shop at Tingley, for Mr. Fred Clough; butcher's shop in Fall-lane, East Ardsley, for the Morley Co-operative Society; three houses in Bradford-road, East Ardsley, for Mr. J. E. Whitley; club at Tingley, for the Tingley Working Men's Club.

Ashton.—Plans passed:—Mr. Thos. Williams (Gadfa), two houses, The Strand; Mr. Jno. F. Hall, two houses, Naylor-street; Mr. Andrew Molyneux, bazaar, Wigan-road; Sunday-school Authority, Sunday-school, Crookall-street; Fairhurst's Brewery, alterations and additions, Eagle and Child; Messrs. Magee, Marshall, & Co., alterations and additions, Bay Horse; Bryn Hall Colliery Company, office additions, Bryn Gateslane; Park-lane Village Club, alterations and additions, Bryn-road; Lord Gerard, conversion to shippons, Florida Farm.

Bardsley.—The Maple Mill Company, Oldham, have decided to erect a new spinning mill in Dowry-street, Bardsley, and plans for Maple Mill No. 2 have been approved by the Limehurst D.C.

Barking.—The U.D.C. intend building thirty artisans' dwellings on the east side of Gascoigne-road.

Barrow.—Plans passed:—Store at tramway depôt, Salthouse-road, for the British Electric Traction Company, Ltd.; gatehouse and timber clerk's office, opposite Rameden Dock-road, for Messrs. Vickers, Ltd.; four dwelling-houses in Risedaleroad, for Mr. P. H. Fisher; house in Flass-lane, for Mr. H. Sambrook; shop and dwelling-house in Park-avenue, for Mr. S. Bowen.

Bedford.—Plans passed by R.D.C.:—Additions to cottage at Sharnbrook, for Mr. E. Barnes; cottage at Wootton, for Mr. F. Fuller; house at Goldington, Bedford-road, for Mr. J. Foster; outhouse and repairs to cottage at Riseley, for Messrs. Williamson & Son.

Bexhill.—Plans for the enlargement of St. Mark's School have been sent to the Board of Education.

Birkenhead.—The E.C. have decided to enlarge the Holt Technical School, at a cost of £13,000.

Blackpool.—Plans passed:—Miss E. Cookson, street-plan, Westmoreland-road; Mr. Jas. Gregson, one house, Bloomfield-road; Mr. C. Marsden, four houses and one shop, Warbreck-drive; Mr. J. Dent, two houses, Forest Gate; Mr. G. Hodgson, thirteen houses, Seafield-road; Mr. R. H. Barnes, two houses, Drummond-avenue; Mr. F. Ayre, two houses, Hampton-road; Mr. J. Brierley, seven houses, Drummond-avenue; Mr. W. Salthouse, four houses, Bela-grove; Mr. J. Lord, two houses, Bloomfield-road; Mr. J. Marsh, one house, Warley-road; Mr. J. Ashworth, one house, Sherbourne-road; Mr. J. P. Hamer, one house, Whitegate-drive; Mrs. P. Downs, two houses, Raikes-parade; Mrs. A. J. Walker, two houses, Westmoreland-avenue; Mr. J. W. Wells, alterations and additions, Seafield, Promenade; Mr. J. Street, motor garage, General-street; Mr. S. Butterworth, motor garage, Rigby-road and Blundell-street; Mr. A. T. Farr, two motor garages, off Lyceum-avenue; Mr. John Whiteside, motor-house, rear of Read's-avenue; Mr. H. Myles, shop front and bay window to house, Lytham-road; Messrs. R. Miller & Son, storeroom, Back Ashburton-road; Mr. S. O. Taylor, garage to house, 195, Hornby-road; Mr. Jas. Harris, two pairs of villas, Manor-road; Mr. G. Fitton, two semi-detached villas, Warbreck Hill-road and Gosforth-road; Dr. L. G. S. Molloy, additions to house, 3, Brighton-parade.

Bungay.—The U.D.C. have decided to erect ten houses for the working class in blocks of five.

Bury.—The T.C. General Purposes Committee have approved a scheme for the erection of 100 municipal houses in Walmersley district.

Camborne.—Plans passed by R.D.C.:—Five-roomed house at Condurrow-road, Bescon, for Mr. Johns; a seven-roomed house at Treswithian Troon for Mr. H. R. Rowe; additions to two houses at Troon for Mr. Trebilcock.

Cheadle.—Plans passed by R.D.C.:—Six houses at Gladstone-street, Adderley Green, for Mr. H. Brittain, and two houses on the Avenue, Cheadle, for Mr. W. Alcock.

Chudleigh.—The L.G.B. have held an inquiry into the application of the Newton Abbot R.D.C. for permission to borrow £3,000 for a housing scheme, it being proposed to erect two blocks of six cottages each.

Connah's Quay.—The L.G.B. have held an inquiry into the application of the U.D.C. to borrow £5,700 for new Council offices and a public hall.

Coventry.—Plans passed by T.C.:—Extensions, Railway Hotel, Warwick-road, for Messrs. Mitchels & Butlers; additions to shop premises, Nos. 519 and 521, Foleshill-road, for Mr. A. Blunt; two houses (amended), Spencer-avenue, for Mr. T. Higgs, alterations and additions (amended), No. 10, The Quadrant, Warwick-road, for the Committee of the Y.M.C.A.; alterations to premises, Smithford-street and West Orchard, for the Coventry Perseverance Co-operative Society, Ltd.; two houses and lock-up shop, Queen Mary's-road, for Mr. J. Isaac; drainage to six houses, Welland-road, for Mr. W. Roy; five houses, Sovereign-road, for Messrs. Osborne & Co.; workshop, Milelane, for Mr. W. I. Iliffe; picture theatre, Primrose Hill-street, for Mr. F. H. Turner; six houses, Queen Mary's-road, for Mr. A. Randle; extensions, Widdrington-road, for Messrs. the Standard Motor Company, Ltd.; picture theatre, King William-street, for Messrs. Bell & Tullett; four houses, Styvechale-avenue, for Mr. J. G. Gray; four houses, Welland-road, for Messrs. Gilbert & Griffin; four houses, Shackleton-road, for Mr. W. Morris; twelve houses, Queen Mary's-road, for Mr. J. Whetstone; twelve houses, Queen Mary's-road, for Mr. T. Carvell; eight houses, Kirby-road, for Mr. C. E. Needham; alterations, 23 and 24, Victoria-street, for the Coventry Perseverance Co-operative Society, Ltd.; two houses, Burlington-road, for Mr. A. Jeffs; two houses, Holbrooks-lane, for Mr. H. H. Parkham; house, Warwick-avenue, for Mr. W. E. Bullock; five rainwater tanks and covered way, Earlsdon-avenue, for Mr. W. H. Satchwell; dairy, etc., off Earlsdon-avenue, for Mr. H. Hiorns; five houses, Hearsall-lane, for Mr. T. F. Bird; seven houses, Radford-road, for Messrs. Robinson Bros.; six houses, Harefield-road, for Mr. Matthews; house, Palmerston-road, for Messrs. Hallam & Co.; shop-front, No. 29, Ford-street, for Mr. W. J. Goodwin; two houses, Clara-street, for Messrs. J. Cox & Son; alterations to premises, Nos. 266 and 268, Narrow-lane, for Messrs. Mitchells & Butlers; eight houses, Terry-road, for Messrs. Jervis Bros.; house and house with shop, Harefield-road, for Messrs. S. & O. Wincott; six houses, Wyley-road, for Messrs. H. Clarke & Sons; seven houses, bakehouse, etc., Lowther-street and Heath-road, for Mr. A. Jeffs; two houses, Alleeley Old-road, for Messrs. Patrick & Barratt; six houses, Orwell-road, for Mr. R. H. Barnacle; thirteen houses, Lewis-road, for Mr. A. Broad; fourteen houses, Sir Thomas White's-road, for Mr. T. F. Bird; twelve houses, Sir Thomas White's-road, for Mr. B. S. Chinn; five houses, Copperfield-road, for Mr. F. Burton; twenty-six houses, Edmund-road, for Mr. G. H. Broad.

Darlington.—Plans for the extension of Mr. Westoll's house at High Coniscliffe and for a house at Harrowgate Village for Mr. James Thompson have been approved by the R.D.C.

Dover.—Plans passed:—Messrs. Fry & Miller, to convert 12, Victoria-crescent, into a shop; Mr. E. F. W. Lewis, two villas at Lower-road, River; Messrs. Beeston & Dixon, alterations and additions to a mineral-water manufactory in Elizabeth-street. Messrs. Jennings & Dutfoit have plans before the Council for an hotel in Beach-street.

Dundee.—The Harbour Trust propose erecting three sheds at the Eastern Wharf.

Earby.—Plans passed by U.D.C.:—Offices, etc., at Albion Mill for the Earby Shed Company; bathrooms to houses in Longroyd-road for Mr. W. Wilkinson and Mrs. Hartley; outbuilding on the premises of Mr. J. W. Morphet in Rostle Top-road.

East Ham.—Plans and estimates for the following isolation hospital extensions, in compliance with the requirements of the L.G.B., have been approved by the T.C.:—Administrative block, thirty-eight beds, £4,660; one-story fever block, thirty-two beds, £4,382; discharge block, six beds, £1,250; alteration to existing nurses' quarters, £1,100—total, £11,392.

Eastry.—A plan submitted from Mr. T. T. Denne, Walmer, of a new house at Sandwich Bay, Worth, for Mrs. Gordon Canning, has been approved.

Elgin.—Reconstruction of Messrs. A. R. Ramsey & Sons' premises, 133, High-street.

Epsom.—The employees at the four L.C.C. asylums in the parish are forming a Co-partnership Housing Company, and propose to erect in all 250 six-roomed cottages, though only fifty will be built for a start.

Gillingham.—The T.C. are considering a scheme for swimming-baths at an estimated expenditure of £3,500. Plans passed:—Two houses, Toronto-road, for Mr. W. E. Clews, submitted by Mr. L. J. Newnham; dwelling-house, Windmill-road, for Mr. R. Parsons, submitted by Mr. G. J. Jeffery; four houses, Richmond-road, for Mr. J. Cornelius, submitted by Mr. E. J. Hammond; bungalow, Hempstead, for Miss A. E. Giles; shop-front, Gillingham-avenue, for Mr. W. Blake, submitted by Mr. A. E. Goodhew;

* See also our list of Competitions, Contracts, etc., on page 684.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare [1]	9	—	9	9	—	9	7½	6½	6½	6½
Accrington	9	9½	9	9	9	9	8½	6	6	6
Altrincham	9½	10	10½	10	8½	9½	9	6	6	6
Ashton-under-Lyne	10½	10½	9½	10	8½	9½	9½	6	6	6
Barnsley	9	9	8½	9½	9	8½	8	7	7	7
Barrow-in-Furness	9½	10	9½	9½	9	9	9½	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6	6	6
Bath	8	8	8½	8	7½	7½	7	5–5½	5–5½	5–5½
Bedford	8	7½	7½	8½	—	8	6½	5	5	5
Birkenhead	11	11	11	10½	10	10	9½	6½	6½	6½
Birmingham	10	10	10	10½	9	10½	9	7	7	7
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10	10	9	9½	9½	9½	6½	7	7
Blackpool	9½	9½	9½	9½	8½	8½	8½	6	6	6
Bolton	10	10½	10	10½	9½	10	9½	—	—	—
Bournemouth	8½	8½	8½	8½	8½	8½	8	6	6	6
Bradford	10	10	9	9½	9½	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	8–9	8	8	—	—	—	—	—	—	—
Bristol [2]	9½	9½	9½	9½	—	9½	9	6½	6½	6½
Burnley	9½	9½	9½	9½	8	9	8½	6½	6½	6½
Burton-on-Trent	9	9	9	9	8½	9	8½	6	6	6
Bury	10	10	10	9	9	10	9	6	6	6
Cambridge	9	8½	8½	9	8	9	7	5½	5½	5½
Canterbury	7½	7½	7	10	—	7	6½	5	5	5
Cardiff	9½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Chatham	8	9	9	9	9	8½	7	6	6	6
Chelmsford	8	7½	8	9	—	7½	6½	5	5	5½
Cheltenham	8½	8½	8½	8½	—	8½	8	5½	5½	5½
Chester	9½	10	9½	9	9	9½	8½	5½	5½	5–5½
Chesterfield	8½	9	8	8	9	9	8½	7½	5½	5½
Colchester	8	8	8	9	8	9	6	5	5	5½
Coventry	9	9½	9½	9½	9½	9½	8½	6½	6½	7
Crewe	8½	8	7½	9	8	7½–8	7½	5	5½	6
Darlington	9	9½	9	9½	9½	9	7½	6½	6½	6½
Derby	9½	9½	9	9	9	9	8	6	6	6½
Doncaster	9	9	9	9	8½	9	8	6½	6½	6½
Dudley	8½	8½	8½	8½	8½	8	7½	5½	5½	5½
Durham	9	9	9	9	9½	9	8	6	6	6½
East Glamorgan and Monmouthshire Valleys	9	9	9	9	—	—	8	6½	6½	6½
Exeter	8	8	7½	7½	7½	7½	6½	5	5	5
Folkestone	8	8	8	9	—	8½	7	5½	5½	5½
Gloucester	8	8½	8½	8	8	8½	8	6	6	6
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	8½	8½	9	8½	8	8½	6½	6½	6½
Great Yarmouth	7½	7½	7½	—	7½	7½	6	4½	4½	—
Halifax	9½	9	9	8½	8½	9	8½	6½	6½	6½
Harrogate	9½	9	9	9	8	9	8½	6½	6½	6½
Hartlepools	9	10	9½	10	10	10	8½	7	7	7½
Hastings	8	8½	8	8½	—	8	7	6	5½	6½
Hereford	8	8	7½	8	8	7	6½	5	5	5
Huddersfield	9½	9½	9	9½	10	9	8½	6½	6½	6½
Hull	9½	9½	9½	9½	9½	9½	8½	7	7	7
Ipswich	8	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	9½	10	9	9	9	8½	8½	5½	6	6
Leamington Spa	9	8½	8½	8½	8	8½	7½	5½	5½	5½
Leeds	10	10	9½	10½	9	9½	8	7	7	7
Leicester	9½	9½	9½	10½	9	9½	9	7	7	7½
Lincoln	9	8½	8½	9	8	8½	8	6	6	6
Liverpool	11	11	11	11	9	10½	9½	6½	6½	6½
Llanelly	9½	9½	8½	8½	—	8½	8	5½	5½	5½
London	11½	11½	11½	11½	9	1s.	9	8	8	8
Loughborough	9	8½	8½	9	—	8½	7½	5	5	5
Luton	8	8½	8½	8½	—	8	7½	5	5	5
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	10	10½	10½	11	9	10	9½	6½	6½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	8	8	6½	6½	6½
Middlesbrough	9	10	9½	10	10	10	8½	7	7	7½
Newcastle-on-Tyne	10	10	10	10	10	10	9	6½	6½	6½
Newport, Mon.	9	9	9	9	8½	10½	9½	6	6	6
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8	8	8	8	8	8	6½	5	5	5
Nottingham	10	9½	10	10½	9½	9½	9	7	7	7½
Oldham	10½	10½	10	9½	9	10	9½	7	7	7½
Oxford	9	8	8½	8½	8	8½	7	6	6	6
Plymouth	9	9	9	9	—	9	7½	6	6	6
Pontypridd	9	9	8½	9	9	9	8	6½	6½	6½
Portsmouth	9	9½	9½	9½	8½	8½	7½	7	7	7
Preston	9½	10½	10	9	8½	9	8½	5½	6	6
Reading	8½	8½	8½	9½	8½	8½	7	5½	5½	5½
Rochdale	10	10½	10	9	9	9½	9	6½	6½	7
Rochester	8	9	9	9	8	8½	8	6	6	6
Rugby	8½	8½	8½	8½	8½	9½	8½	5½	5½	5½
St. Albans	9	9	9	10	9	8½	8	6	6	6
St. Helens	9	9½	9½	9	8	9½	9½	6	6	6
Scarborough	8½	9	8½	8½	8	8	7½	6½	6½	6½
Sheffield	10½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Shrewsbury	8½	8½	8½	8½	—	8½	7	5½	5½	5½
Southampton	8½	9½	9½	8	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	9	9	9½	9	9	9½	9	6	6	6
South Shields	10	10	10	10	10	8½	9	6½	6½	6½
Stockport	10	10	9½	10	9	9½	8½	6	6½–7	7
Stockton-on-Tees	9	10	9½	10	10	10	9	7	7	7½
Stoke-on-Trent	9	9½	9	9	—	8½	8½	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	10	10	10	10	9½	9	9	6½	6½	7
Swansea	9	9	9	9	8½	9	8½	6	6	6
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Wakefield	9½	9½	8½	9	8½	8½	8	7	7	7
Walsall	9	8½	9	8½	8½	8½	7½	6½	5½	6½
Warrington	8½	9½	9½	9½	8½	9½	8½	5½–6	6	6½
West Bromwich	9½	9½	9	9½	—	8½	7½	6½	6½	6½
Wigan	9½	10	9½	9	9	9½	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	9½	8	10	8	6½	6½	6½
Worcester	8½	9	9	8½	8½	8½	7½	6	6	6
York	9½	9½	8½	9½	9½	8½	8	6½	6½	6½

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

houses in Carlton-avenue, submitted by Messrs. Clifford & Co.

Glasgow.—Warrants approved by the Dean of Guild Court:—The Tharsis Sulphur and Copper Company, Ltd., 136, West George-street, to erect buildings on Garngadhill; the Corporation of Glasgow, to construct streets and sewers and erect tenements of dwelling-houses on the lands of Kennyhill, off Cumbernauld-road; Messrs. Barr & Stroud, Ltd., Caxton-street, Anniesland, to alter and add to works there; Glasgow Royal Infirmary, to erect a temporary grand stand facing Cathedral-square; Hyndlands Building Company, and Mr. J. A. Mactaggart, builder, 65, Bath-street, to erect buildings at Edgehill-road, Marlborough-avenue, and Beechwood-drive; Messrs. A. J. Main & Co., Ltd., Clydesdale Ironworks, Possilpark, to erect additions to their buildings at Germiston Ironworks, Petershill-road; Messrs. Frederick Braby & Co., Ltd., to erect a warehouse in Petershill-road; Mr. John Watt, warehouseman, 2, Short-street, Manchester, and Mr. Allan Watt, 401, Sauchiehall-street, Glasgow, to erect warehouse buildings at the corner of Hope-street and Sauchiehall-street.

Golcar.—Plans have been approved of four houses in Swan-lane for Messrs. E. F. & E. Garside; bakehouse and wash-kitchen in James-street for Mr. Herbert Harrison.

Guisborough.—House in High-street, Marske, for Mr. Brittain. Mr. Moore, architect.

Hartlepool.—The T.C. have decided to proceed with an improvement scheme involving the demolition of old property in Durham-street and Brougham-street, and the erection on the sites of modern dwellings at an estimated cost of £8,200. A further scheme for dealing with the Cleveland-street area is estimated to cost between £16,000 and £17,000.

Hayes.—Additions to Denston Lodge for Mr. L. M. Seabrooke; shop, Station-road, for Mr. C. C. Spalding; six houses, Hemman-lane, Mr. W. Minot.

Herne Bay.—Plans passed:—Villa, north side of Western-avenue, for Miss L. M. S. Randall from Mr. J. Wilson; block of six flats, Sea-street, for Mr. R. N. Cattle from Mr. J. Wilson; bungalow, Salisbury-drive, West Cliff, for Mr. A. J. Manwaring from Mr. H. Collis; motor garage and coal-house adjoining "Warfield," Mickleburgh-hill, for Miss Longbotham from Mr. A. S. Ingleton; cottage, Sunny Hill-road, West Cliff, for Mr. E. Riches from Mr. R. Messenger; dwelling-house, Beltinge-road, East Cliff, for Mr. G. E. Simmonds from Mr. R. Messenger.

High Head.—The Carlisle Consistory Court has granted a faculty to the Rev. C. T. Phillips, vicar of Ivegill and High Head, and the churchwardens to take off the roof and roof timbers and remove the ceiling and ceiling joists of the chapel at High Head; to reroof with oak principals and reslate, using the old slates where possible, and to board the interior of the roof.

Lanchester.—Plans approved for two houses at Edward-street, Craghead, for the Co-operative Society; motor-shed at Hamsterley Colliery; and alterations to Field Head Farmhouse, Castleside, for Mrs. Walton.

Lartington.—A new Roman Catholic church is to be erected at Lartington. The building, which will occupy a site opposite the institute, is estimated to cost £800. The contract for the masonry has been let to Mr. Loynes, of Malton, and that for joiner's work to Mr. G. P. Robinson, of Lartington.

Lewisham.—Messrs. Norfolk & Prior, Newquay-road, ten houses on the south side; Mr. J. Nicholls, Manwood-road, six houses on the east side; and Mr. G. F. Havell, Ladywell-road, mision hall on the south side.

Lincoln.—The L.G.B. have held an inquiry into the application of the T.C. to purchase 64 acres of land on the Wragley-road, in the Arbour Hill District, for the purpose of erecting workmen's dwellings. The land is freehold, and the price to be given is £136 per acre.

Loanhead.—The School Board of Lasswade, having decided to erect a new school at Loanhead, recently invited competitive designs from several architects, and have now selected the plans submitted by Mr. J. Inch Morrison, Licentiate R.I.B.A., 24, Duke-street, Edinburgh. Accommodation for 500 pupils will be provided at a cost of between £6,000 and £7,000. The Board's architectural adviser in the competition was Mr. J. A. Carfrae, 3, Queen-street, Edinburgh.

Maidenhead.—Plans passed by T.C.:—Power-house, rear of High-street, for Messrs. Nicholson & Sons, Ltd.; two detached villas, All Saints'-avenue, for Mr. F. G. Keyte; additions to Jersey Lodge, Bath-road, for Mr. F. Horley.

Maidstone.—Plans passed by T.C.:—London-road, additions to No. 23, for Mr. L. Mason; Albion-place, additions to No. 16, for Mr. J. Tomlin; Sittingbourne-road, additions to Foley House, for Mr. John Arkcoll; Bower Mount-road, house for Messrs. Clarke & Epps; Tonbridge-road, new shop-front for Mrs. Ardagh; Cornwallis-road, addition to No. 38, for Mr. H. Dunkin; Upper Stone-street, two sheds for Maidstone and District Motor Services, Ltd.; Mote Park, bothy for Sir Marcus Samuel, Bart.; St. Peter's-street, offices for Messrs. W. A. Stevens, Ltd.; Hart-street, warehouse, etc., for Messrs. G. Foster Clark & Co., Ltd.

Meriden.—Plans passed by R.D.C.:—Two houses, The Green, Castle Bromwich, for Mr. Benjamin Pearson, Gravelly-hill, Birmingham; additions to beer store, Hare and Hounds, Minworth, for Messrs. Ansell's Brewery, Ltd., Birmingham.

Milngavie.—Messrs. S. W. Dunlop & F. S. Jones, 63a, St. Vincent-street, Glasgow, are applying to the Dean of Guild Court for warrant to erect three tenements of dwelling-houses with shops and picture house on the Station-road, Milngavie, and abutting on a new street.

Narberth.—The L.G.B. have approved of the application of the R.D.C. to erect twelve houses at Ridgway.

Potters Bar.—The Middlesex C.C. propose enlarging the Council schools at an estimated cost of £4,275.

Pwllheli.—Houses in Sand-street, for Mr. R. Owen.

Reigate.—Plans passed by R.D.C.:—House, near Salfords, for Mr. F. Parsons, York-villas, Brighton; house, Nursery-road, Walton-on-the-Hill, for Mr. E. Owen Manning, Chichester-place, Brighton.

St. Helens.—The Health Committee have decided to build fifty cottages with one large bedroom each, fifty cottages with two bedrooms, and fifty with three bedrooms.

Tilbury.—Plans for a teacher's house at Upper Ward Council School, estimated to cost £358, have been forwarded to the Board of Education by the Essex E.C.

Tynemouth.—The T.C. have approved a scheme for the development, as an experiment, of 5½ acres of their Balkwell estate for building purposes, with the object of encouraging speculative builders to erect houses with reasonable rentals to relieve the extremely acute demand for housing accommodation. It is proposed to place the land on the market, the sites to be sold at 2s. 6d. and 2s. per square yard, subject to certain conditions framed with the object of preventing the exploitation of the cheap land.

Uldale.—The Carlisle Consistory Court has granted a faculty to the Rev. Henry James Bell, rector of Uldale, and the churchwardens to enable them to make alterations in the old church.

Wembley.—The Middlesex C.C. have approved the plans for a new Council school at an estimated cost of £13,875, and have ordered them to be sent to the Board of Education.

Witham.—House in Collingwood-road for Mr. A. Wallis.

Withernsea.—Plans passed by U.D.C.:—House on the site of Grantham's-cottages, South Cliff, for Mr. Taylor; builder's store-house for Mr. G. Stephenson, on the Warholme-road.

WAGES IN THE BUILDING TRADE.

London.—The present position of the London dispute is dealt with in our leading article in this issue.

Nottingham.—The various committees of the Nottingham and District Association of Building Trades Employers have now completed their negotiations with the operatives' societies, the result being that ½d. per hour advance is being granted to the following trades from the dates given, and the wages for these trades will then be as follows:—Plasterers, 10½d. from March 2, 1914; carpenters and joiners, 10d. from April 1, 1914; slaters, 9½d. from June 1, 1914; bricklayers, 10d. from August 1, 1914; builders' labourers, 7½d. from October 1, 1914; plasterers' labourers, 8d. from October 12, 1914.

Stratford-on-Avon.—The labourers in this district have been on strike for four weeks to enforce a demand for an increase in wages of 1d. per hour (4½d. to 5½d.). The employers have offered an advance of ½d. per hour, which the men refuse to accept.

GENERAL BUILDING NEWS.

CHURCH IMPROVEMENTS, WESTON-SUPER-MARE.

The old painted low chancel screen in the Emmanuel Church, Weston-super-Mare, has recently been removed, and in its place is erected a polished marble step with an alabaster wall. The work was carried out by Messrs. Harry Hems & Sons, of Exeter.

CHURCH, KENNINGTON, S.E.

The site has been cleared for the new Church of St. Anselm, Kennington-road and Sancroft-street, S.E., and the Prince of Wales will lay the foundation-stone of the building on June 13. The architects are Professor S. D. Adshead and Mr. S. C. Ramsey, Great Russell-street, W.C., and the design for the church was shown at the exhibition of the Royal Academy last year.

ST. AIDEN'S CHURCH, BAMBER BRIDGE, NEAR PRESTON, LANCS.

The first portion of this church, consisting of east-end, chancel, chapel, transepts, etc., was erected in 1895, and the present portion consists of new nave and west-end, etc., which faces the main road between Preston and Chorley, and has been noticeable for some time past by the temporary brick west gable. The new portion provides seating accommodation for 264 worshippers, making a total of 686 in the completed church, and the design throughout is in the late Decorated Gothic style. The architect for the work is Mr. Frank R. Freeman, of Bolton, and the contractors Messrs. E. Lewis & Sons, of Blackburn.

OAK CHANCEL SCREEN, ST. LUKE'S CHURCH, ROCHDALE.

A chancel screen in this church was dedicated recently by the Lord Bishop of Whalley, D.D. The screen, which is of Austrian oak, is carved and enriched, and is comprised of seven bays, the centre being 6 ft. wide, with arch and pediment over, surmounted by oak cross, and in the centre of the pediment the sacred monogram, "I.H.C.," is carved. The height of the screen is nearly 16 ft. and the width 23 ft. On the nave side and on one of the lower panels a small brass plate is attached with inscription in red and black enamels. The screen has been carried out from the designs and under the supervision of Mr. Frank R. Freeman, architect, of Bolton, by Mr. John Hanson, of Burnley.

ST. MARK'S, CAMBERWELL, S.E.

The east end and two bays of the nave of St. Mark's, Camberwell, were built many years ago from the designs of the late Mr. Norman Shaw, R.A., and his pupil, the late Mr. Richard Creed, F.R.I.B.A., sent to the Royal Academy Exhibition this year his scheme for the completion of the church and companion buildings. Mr. Creed's practice will be carried on at Verulam-buildings, Gray's Inn, by Mr. A. O. Heal, A.R.I.B.A., a pupil of Bodley, under the title of Messrs. Creed & Heal, and Mr. Heal will have the assistance of Mr. A. R. Reid, who worked with Mr. Creed for over thirty-five years. As regards the work at St. Mark's, Camberwell, the vicarage will be built this year, and subsequently, on the site occupied at present by the vicarage houses, the church will be completed, with its tower.

SCHOOL, WANDSWORTH.

Messrs. Lole & Co., Trafalgar-square, Chelsea, are carrying out the enlargement of the Ensham School, Wandsworth, under the direction of Mr. W. E. Riley, F.R.I.B.A., Superintending Architect to the London County Council.

SCHOOL, HAMMERSMITH, W.

The Victoria School, Hammersmith, is being remodelled under the direction of Mr. W. E. Riley, F.R.I.B.A., Superintending Architect to the London County Council. The general contractors are Messrs. William Moss & Sons, Ltd., Bedford-row, Bloomsbury, W.C.

SANATORIUM FOR THE MIDDLESEX COUNTY COUNCIL.

Mr. H. G. Crothall, F.R.I.B.A., Architect to the Middlesex County Council, submitted to the Council last week a ground plan and perspective drawing of the proposed sanatorium at Eastwood, Essex. The sanatorium is for the accommodation of 220 adults and sixty children. The male and female sections will contain accomodation for ninety patients, each with a central block for forty nursing patients. The estimated cost of the building is £53,890. The plans were approved.

SOUTH LONDON HOSPITAL FOR WOMEN.

The Holland House estate, South-side, Clapham Common, will provide the site of the South London Hospital for Women, and work on the foundations has just been begun. The foundation-stone was laid last year by the Princess Louise. In the new institution women patients will be treated by women, and medical women will be able to obtain the clinical experience they need to guide them in future practice. The hospital will be run on similar lines to the New Hospital for Women in the Euston-road. The architect is Mr. M. E. Collins, F.R.I.B.A., Old Broad-street, E.C., and the contractor at work is Mr. William Downs, Hampton-street, Walworth, S.E.

BRITISH STEEL SMELTERS' ASSOCIATION.

New premises for the British Steel Smelters' Mill Iron and Tin Plate Workers' Association are in course of erection in Swinton-street, Gray's Inn-road, W.C. The architects are Messrs. Ashdown & Price, Vernon House, Bloomsbury-square, W.C., and the general contractors are Messrs. Patrinson & Sons, Parliament-street, Westminster. The reinforced concrete work is by Messrs. D. G. Somerville & Co., Ltd., Victoria-street, S.W. It will be a four-story structure with a brick frontage, and the adjoining property has been purchased with a view to extensions.

THE HAYMARKET THEATRE.

Considerable alterations and redecorations have just been carried out at the Haymarket Theatre under the guidance of Messrs. Romaine-Walker & Jenkins, Old Bond-street, W. Much of the work was done at night and the regular performances were not interrupted. The general decorations were by Messrs. White, Allom, & Co., George-street, Hanover-square, W. The colour scheme of the theatre has been entirely changed, red and gold being replaced by blue and gold. The decoration of the fronts of the boxes, the sides of the stalls, and dress circle, etc., is in fleur de pêche marble, a noticeable feature of the stalls being also the tapestry panels with Boucher subjects. The back and sides of the pit and the dress circle have been panelled in oak. On the circle tier a foyer has been formed by enclosing the back of the dress circle seats with a glazed oak screen. The rest of the joinery in the auditorium has been carried out in oak to match. The wooden seats in the pit have been taken out and replaced by stalls with arms, each seat being separately numbered. The price remains at half-a-crown. The lunettes in the ceiling have been repainted by Mr. Harker. Messrs. Stair & Andrew, Soho-square, W., were engaged on the pit and the foyer; Messrs. Shoolbred & Co., Tottenham Court-road, W.C., supplied the carpets and stalls; and the National Engineering Company, Ltd., Seaton-street, N.W., installed the vacuum-cleaning apparatus.

PAVILION, CLACTON-ON-SEA.

Last week were opened the new Pier Approach Bridge and Entertainment Pavilion which Mr. D. J. Bowe, the Surveyor, has erected at a cost less than his own estimate of £11,500. The entire project will include some cliff bathing pavilions to accommodate eighty persons. The total cost of the improvements is calculated to be £20,000.

TRADE NEWS.

Under the direction of Mr. S. J. Wearing, architect, 15, Upper King-street, Norwich, the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilator and air-inlets, has been applied to the new Primary Department, St. Mary's Baptist Church, Norwich.

The new Catholic Schools, West Hartlepool, are being supplied with Shorland's patent exhaust roof ventilators by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

Claridge's asphalt is being used on the roofs of Skelton Castle, near Saltburn, and for damp-course at Messrs. W. H. Smith & Son's printing offices, Stamford-street, S.E.

In the Report of the Inspector of Ancient Monuments recently issued by the British Government instructions are given to the foremen in charge of the various works of preservation, and the powder Pudlo is suggested as a medium for waterproofing the ancient buildings under the care of the Government.

FOREIGN AND COLONIAL.

Standard Specifications for Portland Cement for National Works, Argentina.

H.M. Chargé d'Affaires at Buenos Aires has forwarded copies of a pamphlet, recently issued by the Argentine Ministry of Public Works, containing the conditions for the supply of Portland cement to, and its acceptance by, that Department when required for use on national works. A few copies of this pamphlet (in Spanish) are available for distribution, and may be obtained by United Kingdom manufacturers of Portland cement on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C.

Extension of Medical School, Otago, Dunedin.

The Imperial Trade Correspondent at Dunedin reports that tenders are now being invited for the extension of the medical school at the Otago University, Dunedin, at an estimated cost of £15,000. The proposed loan of £50,000 for a Town Hall which the Dunedin Corporation had under consideration (see p. 6 of the *Board of Trade Journal* of April 2 last) has now been postponed for about two years.

PATENTS.

APPLICATIONS PUBLISHED.*

7,458 of 1913.—John Middleton Rutter: Boiler for domestic and such-like purpose.

9,690 of 1913.—C. F. Casella & Co., Ltd., and Robert Morrison Abraham: Theodolites and like instruments.

9,728 of 1913.—George Crowther: Climbing or scaling appliances for posts and the like.

10,146 of 1913.—Joseph Baerman Strauss: Bridges.

10,251 of 1913.—Eli Dyson: Squeegees and other apparatus for cleaning roads, floors, and other surfaces.

10,281 of 1913.—Heinrich Becker and Hans Unger: Process for treating fusible domestic and other refuse for obtaining paving or building blocks.

10,493 of 1913.—Herbert Antony Henry Moore: Process for waterproofing and colouring bricks, tiles, earthenware, and the like.

10,590 of 1913.—Arturo Castellazzi: Heating installations.

11,019 of 1913.—Harold Stewart Langton: Extension ladders.

11,025 of 1913. — Johan Adolf Alfred Myström: Hollow building blocks and walls made thereof.

11,105 of 1913.—Arthur Pullen-Burry: Hot-water heating systems.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

11,635 of 1913.—Donald Donald: Combined door catch and lock.

12,951 of 1913.—William John Payne: Sockets for connecting piping.

13,026 of 1913.—James Ward Moseley: Construction of concrete floors, roofs, and the like.

13,051 of 1913.—Alexander James Thornton and George Eagle: Adjusting screw devices for theodolites, levels, and other survey instruments, and such-like.

13,784 of 1913.—Charles Edward Percy Gabriel: Runners for hanging doors, gates, and the like.

13,848 of 1913.—William Henry Luther: Corner posts of fences.

13,909 of 1913.—George Louis Jennings: Construction of boiler for gas-heated cooking-stoves.

13,956 of 1913.—Samuel Acton: Domestic hot-water supply system and apparatus therefor.

14,662 of 1913.—Samuel Turner: Manufacture of tiles, slabs, and sheets, or other articles from fibrous and cement materials.

15,438 of 1913.—George Anderson & Co. (1905), Ltd., and Arthur George Grice: Band-saws for cutting stone and the like.

15,444 of 1913.—Georges Millie: Cleaning devices for wooden floors, pavements, and the like.

18,150 of 1913.—Peter Fredrik Thomsen, Johann Anton Luii, Wilhelmus Johannes Van Dam, and Pierre Theodore Albert Lasschuit: Burners for gas-cookers, gas-boilers, bath geysers, and the like.

18,388 of 1913.—George Russell Wright and Arthur Vivian Allworth Wing: Device for preventing ladders from slipping.

19,830 of 1913.—John Shanks: Supply tanks or cisterns for flushing water-closets.

21,400 of 1913.—George Gordon Brodie and Albert Bertram Coleman: Ovens of kitchen or cooking ranges and other ovens.

22,297 of 1913.—Etienne Douzal: Processes for the manufacture of artificial marble.

22,483 of 1913.—Philippe François Armand Mauroy: System of puttyless glazing.

22,728 of 1913.—Karl Reinert: Door locks.

22,795 of 1913.—Charles Tomkinson and John Thomas Williams: Supporting temporary platforms or centering to carry concrete floors.

23,840 of 1913.—Karl Schonlau: Manufacture of wall or ceiling coverings.

27,692 of 1913.—Joseph Spiegelhalter: Sash fastener.

28,529 of 1913.—Hubert Zotz and Alois Griesl: Fastening devices for hinged windows, fanlights, and the like.

28,867 of 1913.—Frank Iliff: Flushing cisterns for water-closets and the like.

29,164 of 1913.—Jan Koops: Cocks for use with drinkable liquids.

1,141 of 1914.—Hermann Frantz Alfred Heuschkel: Portable column for decorative purposes.

1,155 of 1914.—Alfred Maschke: Manufacture of roof coverings.

2,446 of 1914.—Frank Iliff: Cowls for chimneys, stove pipes, ventilating shafts, and the like.

2,717 of 1914.—Frans Hugo Johansson: Flooring blocks or the like.

3,059 of 1914.—Albert Selby: Devices for making stirrups or links for concrete reinforcements.

3,204 of 1914.—Jean Jacques Sequier: Shower-bath apparatus.

TRADE CATALOGUE.

THE catalogue of Messrs. Young & Marten, Ltd., of the Caledonian Works, Stratford, entitled "Requisites for Building Construction," is one of those which are both comprehensive and excellent of their kind, and in it the country builder will find almost everything which he is likely to want in connection with his various building operations. Such catalogues are exceedingly useful, as they contain all that a contractor needs for any ordinary building and thus save the trouble and inconvenience of reference to a number of specialised catalogues and lists. The first part of its contents is taken up with grates of various types, amongst which may be mentioned the "Hue" barless grate, a modern fuel-saving grate, which can be adapted and used without removing existing mantelpieces, as it is made to suit the base area of existing grates. The "Ray" fire, a gas grate of merit, is also described. A large selection of interiors is given, many of which are excellent. The "maisonnette suite" described on page 47 is a convenient combined cooking-range and interior stove. Among other mantel registers shown are the "Innsbruck," "Madison," "Alperton," and "Morden." A very good assortment of self-cooking stoves is shown, which are likely in the long run to replace the built-in ranges we are accustomed to, as they are easier to clean and more convenient to use. The dual gas and coal kitchener represents a convenient way of utilising the advantages of coal and gas fires. Anthracite heating and special stoves are also given. The plumbing section is very comprehensive, which gives every variety of fitting required, both in the form of detailed fittings and sanitary suites, including "Lodown Closet Suites" and earth closet apparatus. Among lavatory fittings, folding lavatories and pedestal lavatories of different types find a place, as well as lavatory ranges, with which we may mention the "Harrogate," a make in which the front of each basin is conveniently curved, while the back part forms one continuous plane; a good selection of urinal fittings is also given. A large number of baths is shown; a convenient and novel form is the "New Cottage Bramstone" combination bath and lavatory, which would be a great convenience where space is limited. The lavatory fitting rests on brackets over the end of the bath, the same taps and wastes thus serving both purposes. Towel-airers, geysers, and other smaller accessories are included, even toilet mirrors. A large selection of porcelain fittings is shown, as well as tip-up baths. Pumps and ventilators form a part of this section. The "Decorators' Paint, Colour, Varnish, and Enamel Section" follows, in which every requisite of the decorator's wants can be found. The "Wharf Department Section" includes damp-courses, stoneware, drain-pipes, lime, cement, plaster, bricks, paving, and roofing materials, while in the "Timber and Joinery Section" a large assortment of ready-made joinery is given, and the firm supplies builders' timber in useful sizes, as well as ready-made fencing of many descriptions. The Ironmongery Section comprises everything a builder is likely to want, in addition to a selection of woodworking and drilling machinery, wrought-iron casements, leadless glazing, rainwater goods, manhole covers, and leaded lights, also gates and railings, radiators, and stable fittings, and even standards for theatre seats. We have said enough to show the nature and scope of the catalogue, which will be very useful to many, and the prices quoted are those which no firm except one whose operations were very large could afford to charge, an undoubted advantage from a purchaser's standpoint. If we cannot admire the design of some of the fittings shown, the fault does not lie with the firm, which must cater for the average consumer and to a large extent supply what he is most likely to demand; but, even as it is, it may be said that the average is a far better one than would have been the case some years ago and when the general public is better educated in matters of design our manufacturers' designs will reflect that improvement.

LAW REPORTS.

(*Continued from page 677.*)

On the counterclaim he found that any delay that had occurred was caused by variations in the contract, and that the defendants were not entitled to any damages in such counterclaim. The learned Referee then referred to the condition relating to certificates. He was of the opinion that a certificate was not required for the balance of the work; but in any event, he came to the conclusion upon the evidence, and especially on the letters disclosed between Mr. Edyman and Mr. Rapson, that the defendants were estopped from relying upon any such condition on the grounds set out in paragraph 3 (b) of the plaintiff's reply.

The conclusion he arrived at on the whole matter was that the plaintiff was entitled to £374 on the contract proper, £81 9s. for extras, or £455 9s. in all, from which sum must be deducted £258 paid. That left a balance of £197 9s., and there must be judgment for the plaintiff in the claim for that amount, with costs, and judgment for the plaintiff on the counterclaim, with costs.

COURT OF APPEAL.

(Before Lords Justices BUCKLEY, KENNEDY, and SCRUTTON.)

Case under the London Building Act: London County Council *v.* Allen and Others; Same *v.* Same.

THE hearing was concluded of this case last week.

The facts sufficiently appear from the judgment.

Lord Justice Buckley, in giving judgment, said the actions were brought by the Council under an indenture of January 24, 1907, made between Mr. Maurice Joseph Allen, a builder, and the Council, who claimed certain mandatory injunctions, and for damages for breach of a covenant in the indenture. Before the date of the execution of the indenture Mr. M. J. Allen had applied to the Council for permission under sect. 7 of the London Building Act, 1894, to his laying out a new road called Galloway-road, and a small portion of road at the northern end of Galloway-road, in continuation of Dunraven-street at Shepherd's Bush. The Council gave permission on certain terms, which were embodied in the covenant of January, 1907. The covenant stipulated that Mr. Allen undertook for himself, his heirs and assigns, and all other persons claiming under him, so far as was practicable, that he and they would not erect or place, or cause to be erected, any building or structure, or any other erection, without the consent of the Council, and that in every covenant, sale, charge, or mortgage, or lease of the land, he would give notice of the covenant. The indenture, said the President, recited what was contrary to the fact, viz., that Mr. M. J. Allen was the owner in fee simple. He was not. At that time he had merely an option to purchase what was known as plot one, which was the continuation of Dunraven-street to the west of Galloway-road and the continuation of Galloway-road to the north of Dunraven-street. As regarded plot one, on July 3, 1908, it was conveyed to Mr. M. J. Allen in fee simple and the same day he mortgaged it to one Mr. Willcox for £3,600. On August 1, 1911, the mortgage was redeemed, and Mr. Willcox conveyed the land to the defendant, Mrs. Emily Allen, and on October 9, 1911, she charged the land, together with three messuages then recently erected, to one Mr. Norris. It was in July, 1911, Mrs. Allen built the three houses on plot one. The writ was issued by the Council on August 5, 1911, by virtue of sects. 7 and 9 of the London Building Act, 1894. The Council had certain powers and control over land as to how it should be laid out in streets, but they had no estate or interest in the land adjoining or affected by the covenant. Under these circumstances Mrs. Allen and Mr. Norris, who were no covenanting parties, contended as a matter of law, assuming there had been a breach of the covenant of January, 1907, and of which they had not had notice, the plaintiffs could not maintain any action against them; the respondents did not contend that the covenant ran with the land, and the position of landlord and tenant did not exist. To the general abstract question that a person purchasing land with such a coverant attached was bound by it must be answered in the negative. It was not true, as a general proposition, that a purchaser of property having notice of the existence of such a restrictive covenant affecting the property, was bound by such a covenant. Under these circumstances it was not necessary to determine whether the notice of the covenant was or was not given. If the case went further, that point could be settled by the House of Lords. The erection of the houses was, undoubtedly, a breach of the covenant; but the learned Judge in the court below (Mr. Justice Avory) had refused the injunction asked for by the Council, and had given nominal damages for a technical breach. Therefore there only remained the question of costs. As regarded plot two, the only defendant was Mr. M. J. Allen, who contended that the wall he erected was not a building, an erection, or a structure. The object of the covenant was to secure that plot two should remain unobstructed and be available for the extension of Galloway-road. The wall erected by Mr. M. J. Allen created such an obstruction and the erection of the wall was a breach of the covenant. The defendant, Mr. M. J. Allen, said there was a sharp drop to the surface of the soil, and that the fence was necessary for the protection of the public, and that it was only a temporary fence. Had the defendant pleaded that at the trial and said he would have removed it if requested, there would have been no difficulty. Instead of doing that, he submitted it was not a structure, and the Judge in the court below had rightly made an order for the fence to be removed. As to plot two, Mr. M. J. Allen must pay the costs, and as the Council failed in respect of plot one, they must pay the costs in respect of that. There might have been a different way of dealing with the costs, but the Court would not interfere as to the defendants dividing the costs. The order would be that the action against Mrs. Emily Allen and Mr. Norris would be dismissed with costs, and the appeal by Mr. M. J. Allen would be dismissed with costs.

Lord Justice Kennedy and Mr. Justice Scrutton concurred.

GRILL-ROOM, BERKELEY HOTEL.

In reference to the illustrations of the new grill-room at the Berkeley Hotel which appeared in our last issue we are asked to mention that the constructional works, joinery work, and plastering were carried out by Messrs. J. Simpson & Son, builders and contractors, Paddington-street, St. Marylebone, W.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x. xii.; Public Appointments, xxviii.; Auction Sales, xxxiii., xxxiv. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur.

Competitions.

JUNE 20.—**Orillia.**—MONUMENT.—The Executive Committee of the Champlain Tercentenary Committee invite competitive designs for a monument to Samuel de Champlain. Not to cost more than £4,100. See advertisement in issue of February 13.

JUNE 23.—**Sunderland.**—SCHOOL.—The Sunderland B.C. invite competitive designs for a proposed secondary school. Premiums £100, £50, and £25 respectively. See advertisement in issue of April 24.

JULY 16.—**Middleton.**—TOWN HALL.—The Middleton Corporation invite competitive designs for a new Town Hall. Premiums, £100, £50, £20 respectively. See advertisement in issue of April 24.

* JULY 25.—**Redhill.**—POLICE AND FIRE STATION.—The Reigate B.C. invite competitive designs for a new police and fire station. Three premiums are offered, viz., 40, 20, and 10 guineas.

SEPTEMBER 7.—**London.**—SCHOOLS.—The L.C.C. invite architects to submit designs for two new schools. See advertisement in issue of May 1.

JANUARY 15, 1915.—COLLEGE MEMORIAL LECTURE HALL.—Designs for the Alexander Thompson Travelling Studentship must be delivered by the above date.

* NO DATE.—**Liverpool.**—LAYING-OUT AN ESTATE.—The Parks and Gardens Committee of the Liverpool Corporation invite designs for laying-out an estate as a public park and recreation grounds. Premiums, 100, 50, and 25 guineas respectively.

* NO DATE.—ROME SCHOLARSHIP IN ARCHITECTURE.—Particulars of the competition for the Rome Scholarship offered by the Royal Commissioners, and for the Jarvis Studentship (£200 per annum each) can now be obtained.

* NO DATE.—**Whitby.**—IMPROVEMENTS TO THEATRE, ETC.—The Whitby U.D.C. invite plans for the improvement of Whitby Saloon Theatre and Grounds.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 8.—**Ashford.**—PAINTING, ETC.—Execution of painting and repairs required to be carried out at the Ashford County School for Girls for the Kent E.C. Specification, prepared by the Committee's Architect, Mr. Wilfrid H. Robinson, M.S.A., of Sessions House, Maidstone, Kent, of the Local Secretary, Mr. W. J. Spicer, 19, Bank-street, Ashford.

JUNE 8.—**Bradford.**—ENTRANCE.—Excavator, mason, and bricklayer's work in the formation of a new entrance, etc., at St. James's Market. Quantities of the City Architect, Town Hall, Bradford.

JUNE 8.—**Coleford.**—SHOPS, ETC.—Erection of a pair of shops with outbuildings, and for the execution of certain alterations to existing premises at Coleford, near Bath, for the Coleford Co-operative and Industrial Society, Ltd. Quantities of Mr. William F. Bird, M.S.A., architect, Midsomer Norton.

JUNE 8.—**Glanvilles Wootton.**—HOUSE.—Erection of dwelling-house, stable block, and drainage at Glanvilles Wootton, near Sherborne. Specifications of Mr. W. J. Gillingham, architect, Riverside, Sherborne.

JUNE 8.—**Glasgow.**—ADDITIONS.—Additions and alterations at the Western Police-buildings, Cranston-hill, for the Corporation. Specifications at the Office of Public Works, City-chambers, 64, Cochrane-street.

JUNE 8.—**Paddington, etc.**—PAINTING, ETC.—Cleaning and repainting station buildings, etc., at the following places:—(40) Paddington Goods Station; (41) South Lambeth and Victoria and Albert Docks; (42) Old Oak Common, Hanwell, etc.; (43) Newbury, Lambourne, etc., for the Great Western Railway Company. Quantities of the Engineer at No. 7, Eastbourne-terrace, Paddington, W.

JUNE 8.—**Peterborough.**—ENGINE-HOUSE.—Erection of engine-house at Dogsthorpe, for the Peterborough R.D.C. Specification at the Surveyor's Office, Queen-street, Peterborough.

JUNE 8.—**Porth.**—THEATRE.—Cinema theatre at Porth. Names to Mr. T. E. Richards, A.R.I.B.A., Market-square-chambers, Pontypridd, and 82, Queen-street, Cardiff. Deposit, £1 1s.

JUNE 8.—**South Shields.**—OFFICES.—Erection of offices for the Ferry Superintendent and the Dredging Superintendent at the Market-place Ferry Landing, South Shields, for the Tyne Improvement Commissioners. Quantities of Mr. J. McDonald Manson, General Manager and Secretary, Tyne Improvement Commission Offices, Newcastle-upon-Tyne. Deposit, £1.

JUNE 8.—**Wakefield.**—CONVENIENCES.—Erection of conveniences at Warrengate for the Corporation. Quantities of Mr. J. P. Wakeford, City Surveyor, Town Hall.

JUNE 9.—**Aberdare.**—PLATFORM COVERINGS.—Erection of platform coverings at Aberdare Station, Mon., for the Great Western Railway Company. Quantities of the Engineer at Newport Station.

JUNE 9.—**Andover.**—ALTERATIONS.—For alterations and repairs to the premises of the Andover Co-operative Society. Specifications of Mr. E. Wade, Manager, Bridge-street, Andover.

JUNE 9.—**Bontnewydd.**—COTTAGE.—Erection of a cottage at Bontnewydd, near Dolgelley, for the Great Western Railway Company. Specification of the Engineer at Shrewsbury Station.

JUNE 9.—**Cambridge.**—PAINTING.—For painting the general ironwork, buildings, etc., at the Cattle Market. Specification of the Borough Surveyor, Guildhall, Cambridge.

JUNE 9.—**Herne Bay.**—VENTILATION.—Improvement to ventilation at Herne Bay Council School for the Kent E.C. Specification, prepared by the Committee's Architect, Mr. Wilfrid H. Robinson, M.S.A., of Sessions House, Maidstone, Kent, of the Correspondent, Mr. G. Jackson, 44, Douglas-road, Herne Bay, Kent.

JUNE 9.—**Pembroke.**—CONVENIENCES.—Construction of public sanitary conveniences at Ballsbridge, Donnybrook, for the Pembroke U.D.C., Co. Dublin. Specifications, etc., at Town Hall, Ballsbridge. Deposit, £1.

JUNE 9.—**Penzance.**—DEPÔT.—Erection of a road motor depôt at Leskinnick-street, Penzance, for the Great Western Railway Company. Quantities of the Engineer at Plymouth, North Road Station.

JUNE 9.—**Rochester.**—REPAIRS.—For repairs to technical school for the Kent E.C. Specifications of the Local Secretary, Mr. R. L. Wills, 2, Military-road, Chatham.

JUNE 9.—**West Bromwich.**—OFFICES, ETC.—Erection of goods offices, stables, etc., at West Bromwich Station for the Great Western Railway Company. Quantities of the Engineer at Wolverhampton Station.

JUNE 10.—**Aberdeen.**—ADDITIONS.—For additions to police offices, Aberdeen. Quantities of the City Architect, 224, Union-street, Aberdeen.

JUNE 10.—**Alder Hey.**—HOUSE, ETC.—Erection of proposed receiving-house and doctor's quarters, Alder Hey, for the West Derby Union. Quantities of Mr. Harris P. Cleaver, Union Clerk, Brougham-terrace, West Derby-road, Liverpool. Deposit, £2 2s.

JUNE 10.—**Auchinroath.**—ALTERATIONS, ETC.—Additions and alterations to gardener's house and offices at Auchinroath, Rothes. Mr. A. J. Mitchill Gill, Auchinroath.

JUNE 10.—**Devonport.**—PAINTING, ETC.—For painting, etc., Public Library and Museum. Specifications of Mr. J. F. Burns, Borough Surveyor, Devonport.

JUNE 10.—**Lees.**—GREENHOUSE.—Erection of a greenhouse at the cemetery, Lees. The tenders for the work will be divided in two parts (one for the brickwork, joiners' work, glazing, and painting, and one for the heating of the greenhouse). Quantities of the Surveyor, Council Offices, Lees.

JUNE 10.—**Manchester.**—PAINTING, ETC.—For painting and distempering required at the Dickinson-street and Bloom-street generating-stations. Specifications of Mr. F. E. Hughes, Secretary, Electricity Department, Town Hall, Manchester.

JUNE 10.—**Tolworth.**—LARDERS, ETC.—Erection of two small larders and cupboards at the hospital, Tolworth, for the Tolworth Joint Hospital District Board. Specification from the architect, Mr. H. Jessop Hardwick, F.R.I.B.A., Eagle-chambers, Kingston-on-Thames.

JUNE 10.—**Tonyrefail.**—HOTEL.—Erection of the Boar's Head Hotel at Tonyrefail. Quantities of Messrs. Arthur Ll. Thomas & Gomer S. Morgan, architects and surveyors, Pontypridd. Deposit, £2 2s.

JUNE 11.—**Dewsbury.**—DECORATION.—Redecoration of Centenary Wesleyan Church, Dewsbury. Specifications of Mr. Joseph Myers, 12, Hope-street, Dewsbury.

JUNE 12.—**Bingley.**—PAINTING, ETC.—For painting, etc., at Haworth Lees, Laycock, Oxenhope, and Horkinstone schools, for the Worth Valley District E.C. Specifications of Mr. B. Leah, Education Office, Bingley.

JUNE 12.—**Glasgow.**—PAINTING.—For painting recreation hall at Gartloch Mental Hospital, Gartcosh, for the Glasgow P.C. Quantities of Mr. James R. Motion, Inspector and Clerk, Parish Council-chambers, 266, George-street, Glasgow.

JUNE 12.—**Huddersfield.**—SCHOOL.—Erection of a new Sunday-school at Outlane. Quantities of Messrs. Joseph Berry & Sons, architects and surveyors, 3, Market-place, Huddersfield.

JUNE 12.—**Margate.**—PAINTING, ETC.—For painting and executing repairs at certain schools for the E.C. Specifications of Mr. E. A. Borg, Borough Surveyor, 13, Grosvenor-place, Margate.

JUNE 12.—**Nottingham.**—ADDITIONS.—New exits, movable floor over swimming pond, platform, etc., at the Victoria Baths, Sneinton, Nottingham, for the Corporation. Quantities from the City Architect, Mr. A. Dale, Guildhall. Deposit, £2 2s.

JUNE 12.—**Prestwich.**—SHELTERS.—Providing and fixing four shelters in the grounds of the Infirmary, Charlestown-road, Blackley, Manchester, for the Prestwich Board of Guardians. Mr. Philip E. Ogden, Acting Clerk to the Guardians, Union Offices, Cheetham Hill-road, Manchester.

JUNE 12.—**Rhondda.**—BANDSTANDS.—Supply of two bandstands to the Gelli and Penygraig Parks, for the Rhondda U.D.C. Specifications of Mr. E. Taylor, Acting Engineer, Council Offices, Pentre. Deposit, £1 1s.

JUNE 12.—**Stepney.**—PAINTING.—For interior painting and distempering work at the Children's Receiving Home, Salmon-lane, Ratcliff, E., for the Stepney Guardians. Specifications of Mr. T. G. Stacey, Clerk, Guardians' Offices, Barnes-street, Stepney, E. Deposit, £1 1s.

JUNE 13.—**Greenwich.**—PAINTING.—For the internal and external repainting of the Central Library, Woolwich-road, for the B.C. Specification from the Chief Librarian at the Central Library.

* JUNE 13.—**Hampstead.**—BOILER HOUSE, SHAFT, MORTUARY.—The Metropolitan Asylums Board invite tenders for erection of a boiler house, chimney shaft, mortuary, etc.

JUNE 13.—**Whitehaven.**—PAINTING.—Painting, etc., of Irish-street, Crosthwaite, and St. James's Schools, for the Education Committee. Specification of the Secretary, Town Hall, Whitehaven.

JUNE 15.—**Barnet.**—SHEDS.—For erection of five tool sheds on allotments, and providing any further sheds required for twelve months, for the East Barnet Valley U.D.C. Specifications of Mr. H. York, Surveyor to the Council, Station-road, New Barnet.

JUNE 15.—**Beverley.**—ALTERATIONS.—For alterations to Minster Moorgate and Minster Girls' Schools. Specifications of Messrs. Harve & Foley, architects, North Bar-street, Beverley.

JUNE 15.—**Bristol.**—PAINTING.—For the painting, colouring, etc., of certain Council and voluntary schools. Specifications from Mr. Peter Addie, Exchange, Corn-street, Bristol. Deposit, £1 1s.

JUNE 15.—**Bury St. Edmund's.**—PAINTING.—For painting various schools, for the West Suffolk E.C. Specifications of Mr. A. A. Hunt, County Architect, 51, Abbeygate-street, Bury St. Edmund's.

JUNE 15.—**Dublin.**—RECREATION-ROOM.—Recreation-room of timber construction in connection with the Tuberculosis Hospital, Pigeon House-road, Dublin. Specification of the City Architect Municipal-buildings, Cork-hill, Dublin.

JUNE 15.—**Hirwain.**—PICTURE PALACE, ETC.—Erection of a picture palace and billiard Hall at Hirwain, for the Hirwain Picture Palace, Ltd. Quantities of Mr. T. Edmund Rees, M.S.A., architect, Bank-chambers, Merthyr Tydfil.

JUNE 15.—**Knottingley.**—HOUSES.—Erection of proposed constables' houses at Knottingley, for the West Riding Standing Joint Committee. Quantities of the West Riding Architect, County Hall, Wakefield. Depost, £1 1s.

JUNE 15.—**Samford.**—ALTERATIONS.—Additions and alterations at the Infectious Disease Hospital at Tattingstone, for the Samford R.D.C. Specification of Mr. Arnold J. Haward, Clerk, 34, Princes-street, Ipswich.

JUNE 15.—**Whitby.**—ALTERATIONS.—For alterations and additions to cemetery lodge. Quantities of Mr. E. W. Smales, architect, 48, Baxter-gate, Whitby.

JUNE 15.—**Wigan.**—PAINTING, ETC.—For painting, colouring, limewashing, etc., required at the following schools:—St. Andrew's, National and Blue Coat, Wesleyan, St Paul's (Goose Green), Pemberton Colliery, Warrington-lane Council. Specification of Mr. Geo. H. Mockler, Director of Education, Education Offices, Wigan.

[Those with an asterisk (*) are advertised in this issue.]

BUILDING, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 16.—**Cardiff.**—PAINTING, ETC.—For painting and colouring St. Mary's Mission, St. David's R.C., and St. Cuthbert's R.C. Schools, for the Cardiff Education Committee. Specifications from Mr. John J. Jackson, Director of Education, City Hall, Cardiff.

JUNE 16.—**East Ham.**—CLEANSING, ETC.—For cleansing and whitewashing the latrines and urinals at twenty-two schools, for the East Ham Education Committee; also for repairing, painting, and sundry work at ten schools. Specifications of Mr. F. R. Thompson, Secretary, Education Office, East Ham, E. Deposit, £5.

JUNE 16.—**Rochester.**—ALTERATIONS, ETC.—Alterations and additions to the public conveniences at North-street, Strood, for the Corporation. Specifications of Mr. William Banks, A.M.Inst.C.E., City Surveyor, Guildhall, Rochester.

JUNE 16.—**Rochester.**—WALL.—Removal and rebuilding of about 58 lin. yds. of brick wall at Frindsbury-road, for the Corporation. Specifications of Mr. William Banks, A.M.Inst.C.E., City Surveyor, Guildhall, Rochester.

* JUNE 17.—**Chipping Ongar.**—ADDITIONS.—The Hackney Guardians invite tenders for erection of additional bedroom accommodation and lavatories at the children's home.

JUNE 17.—**Glyncorrwg.**—HOUSE.—Erection of a minister's house at Glyncorrwg, for the Building Committee of Carmel C.M. Chapel. Specification of Mr. Morgan Evans, 12, Dunraven-street, Glyncorrwg, near Port Talbot. Mr. P. J. Thomas, architect and surveyor, Bridgend.

JUNE 17.—**Hull.**—PAINTING.—For painting and cleaning at certain of the schools, for the Hull Education Committee. Forms of tender of Mr. J. T. Riley, Director of Education, Education Offices, Albion-street, Hull.

JUNE 17.—**Prescot.**—PAINTING, ETC.—For (*a*) painting and external painting of portion of the old general hospital; (*b*) painting and external painting of the children's home; (*c*) supply and fixing of galvanised-iron roof to shelter in children's home yard, for the Prescot Board of Guardians. Specifications, etc., from Mr. W. Ellis, architect, 9, Hardshaw-street, St. Helens. Deposit, 10s. 6d.

JUNE 18.—**Barrow-in-Furness.**—SCHOOL.—Erection of proposed schools, Victoria, Oxford-street, and Ocean-road, Vickerstown, for the Corporation. Quantities of the Borough Engineer and Surveyor, Town Hall, Barrow-in-Furness.

* JUNE 18.—**Brixton.**—GALLERY AND BOOKSHELVES.—The Lambeth B.C. invite tenders for construction of a gallery and provision of bookshelves.

JUNE 18.—**Hinckley.**—AWNING, ETC.—For constructing an awning over the footpath at the station entrance at Hinckley, and also for building an additional story on the goods offices on the Midland Railway side of the station, for the London and North-Western Railway Company. Quantities at the Divisional Engineer's Office, Castle Station, Northampton.

* JUNE 18.—**Kensington.**—FLOORS, ETC.—The Kensington B.C. invite tenders for Armadek flooring, plastering, decorative works, stoves, etc.

* JUNE 18.—**Kent.**—ERECTION OF BUILDINGS.—The Kent C.C. invite tenders for the erection of a new bakery, new workrooms, additions to farm buildings, etc.

JUNE 18.—**Ramsgate.**—PAINTING.—For painting block at Poor Law Institution at Minster, near Ramsgate, for the Isle of Thanet Union. Specification of the Master.

JUNE 18.—**Southery.**—PUMPING-STATION.—Erection of a new pumping-station, immediately adjoining the existing pumping-station of the Feltwell New Fen Drainage Commissioners, at Southery, Downham Market, Norfolk. Quantities of the Engineer to the Commissioners, Mr. E. J. Silcock, M.Inst.C.E., Sanctuary House, 33, Tothill-street, Westminster, and 10, Park-row, Leeds. Deposit, £5.

JUNE 19.—**Rhondda.**—PAINTING.—For painting and colouring the undernamed schools during the midsummer school vacation, viz.:—Blaenrhondda, Penyrenglyn, Park, Bodringallt boys', Gelli (excepting iron buildings), Blaenclydach, Trealaw boys', Alaw, Penygraig girls', Dinas boys', Graigddu, Ialwyn, Aberliechau, Pontygwaith, and Tylorstown schools, for the U.D.C. Specifications at the Architect, Mr. Jacob Rees, Hillside Cottage, Pentre.

JUNE 19.—**Rhondda.**—SCHOOL BUILDING.—Erection of a manual-instruction centre at Treherbert, for the Rhondda U.D.C. Quantities of the Architect, Mr. Jacob Rees, Hillside Cottage, Pentre. Deposit, £1 1s.

JUNE 22.—**Chelmsford.**—ENGINE-HOUSE, ETC.—Erection of an engine-house and engine driver's cottage at the waterworks, Galleywood, for the T.C. Particulars at the Borough Engineer's Office.

* JUNE 22.—**Dover.**—SCHOOL.—The Kent E.C. invite tenders for erection of a school.

JUNE 22.—**Evesham.**—COTTAGES.—Erection of twenty-four cottages at Middle Littleton, for the Evesham R.D.C. Specifications of Mr. E. H. Wadams, Clerk to the Council, Union Offices, Evesham. Deposit, £2 2s.

* JUNE 22.—**Finchley.**—ONE HUNDRED DWELLINGS.—The Finchley U.D.C. invite tenders for work in connection with the erection of dwellings.

JUNE 22.—**Truro.**—HALL, ETC.—Erection of the Central Hall and Barham Memorial Gallery, at River-street, Truro, for the Committee of the Royal Institution of Cornwall. Quantities of Mr. Sampson Hill, architect, Green-lane, Redruth. Deposit, £1 1s.

* JUNE 23.—**Chelsea.**—PAINTING.—The Chelsea Guardians invite tenders for external painting at the Infirmary.

* JUNE 23.—**Stockwell.**—ALTERATIONS AND PAINTING.—The Lambeth Guardians invite tenders for alterations and painting at the Relief Station.

* JUNE 24.—**Guildford.**—TELEPHONE EXCHANGE.—The Commissioners of H.M. Works, etc., invite tenders for the erection of Guildford Telephone Exchange.

JUNE 25.—**Thurgoland.**—WALLING.—For dry walling round churchyard at Thurgoland. Specifications from Rev. G. H. Hewison, Thurgoland Vicarage.

* JULY 10.—**Croydon.**—SCHOOL.—The Croydon E.C. invite tenders for erection of a school for 720 scholars.

* JULY 11.—**Denbigh.**—TOWN HALL, ETC.—The Denbigh B.C. invite tenders for erection of Town Hall and market buildings, including clearing away existing buildings.

NO DATE.—**Birmingham.**—DEMOLITION.—Pulling down and removal of premises situate on the angle of Pershore-street and Bath-passage, Birmingham, for the Co-operative Wholesale Society, Ltd. Specification from the architect, Mr. F. E. L. Harris, A.R.I.B.A., Co-operative Wholesale Society, Ltd., 1, Balloon-street, Manchester. Deposit, £1 1s.

NO DATE.—**Cardiff.**—HOUSES.—Erection of 400 workmen's houses, near Cardiff. Builders may tender for a part or the whole of the 400. Applications to Mr. W. Beddoe Rees, Architect, No. 3, Dumfries-place, Cardiff.

NO DATE.—**Carnforth.**—HOUSE.—Masonry, slating, plastering, and plumbing for house at Crag Bank, Carnforth. Specifications of Mr. E. Whinray, 5, Market-street, Carnforth.

FURNITURE, MATERIALS, etc.

JUNE 10.—**Barrow-in-Furness.**—FURNITURE.—For furniture for the new wards recently added to the Workhouse. Specification of the Master at the Workhouse.

JUNE 10.—**Manchester.**—MATERIALS.—Supply to the Cleansing Committee of twelve months' supply of agricultural drain pipes, and the supply of 1,000 creosoted sleepers for light railway. Specification of Mr. R. Williamson, Superintendent of the Cleansing Department, Town Hall, Manchester.

JUNE 11.—**India.**—MATERIALS.—For supply to the Great Indian Peninsula Railway Company of laminated springs, etc.; steel tyres, brass hinges, handles, etc.; ramps, Sheffield tools, etc.; lamp glasses, etc.; wicks, lubricating pads, etc.; grindstones, steel work for bridges, spare parts of carriages and waggons. Specifications of Mr. R. H. Walpole, Secretary, Company's Offices, 48, Copthall-avenue, London, E.C.

JUNE 11.—**Stoke-on-Trent.**—MATERIALS.—Supply to the Gas Department of materials, comprising oils, steel mains, iron mains, lamp columns, glass, etc. Specifications of the Engineer at the gasworks.

JUNE 17.—**Dublin.**—STORES.—Supply to the Cavan and Leitrim Railway Company, Ltd., of various stores. Tender forms of Mr. R. R. Stewart, Secretary, 19 and 20, Fleet-street, Dublin. Charge 1s. each.

JUNE 17.—**Hyde.**—SEATING.—For seating accommodation required in connection with the new Public Hall, Corporation-street, for the Corporation. Form of tender of Mr. J. H. Fletcher, architect, 45, Clarendon-place, Hyde.

JUNE 30.—**Egypt.**—PAILS AND CHAIRS.—Supply of galvanised pails and Windsor chairs for the Egyptian War Department. Particulars from Sir A. L. Webb, K.C.M.G., Queen Anne's-chambers, Westminster, S.W.

NO DATE.—**Grangemouth.**—MATERIALS.—Supply to the T.C. of water pipes, malleable iron tubes, fireclay goods, general castings, cement, wood, glass, hardware, disinfectants, oils, paints, etc. Schedules of Mr. David A. Donald, C.E., Burgh Engineer, Town Hall, Grangemouth.

NO DATE.—**Pontypridd.**—CEMENT.—Supply of about 350 tons of cement to the British Standard specification latest edition, for the Pontypridd and Rhondda Joint Water Board. Mr. W. P. Nicholas, Clerk to the Board, Mill-street, Pontypridd.

ENGINEERING, IRON, AND STEEL.

JUNE 10.—**Belfast.**—RAILS.—Supply of about 100 tons of best rolled-steel tramway rails, etc., for the Belfast Harbour Commissioners. Specification from the Harbour Engineer, Belfast.

JUNE 10.—**Durham.**—RESERVOIR.—Construction of ferro-concrete reservoir (Hennebique system) for the Durham R.D.C. Specifications of Mr. Geo. Gregson, Surveyor to the Council, Durham.

JUNE 10.—**India.**—RAILS.—Supply to the South Indian Railway Company, Ltd., of steel rails (85 lb. B.S. flat-bottom), about 2,370 tons, and fishplates for rails, about 86 tons. Specifications of Mr. V. E. De Broe, M.Inst.C.E., for Managing Director, 91, York-street, Westminster, S.W. Charge, £2.

JUNE 11.—**Glasgow.**—LAUNDRY ENGINEERING.—For the engineering work required at the Public Baths and Washhouses being erected at Govanhill. Specifications at the Office of Public Works, City-chambers, 64, Cochrane-street.

JUNE 12.—**Rhondda.**—BRIDGE.—For steelwork bridge with trestles over Princess Louise Bridge, Llwynypia, 10 ft. wide, in three spans, total length 14 ft.; weight about 30 tons, for the Rhondda U.D.C. Specifications of Mr. E. Taylor, Acting Engineer and Surveyor, Council Offices, Pentre, Rhondda. Deposit, £1 1s.

JUNE 13.—**Deudraeth.**—CAST-IRON PIPES.—Supply of about 160 tons of 5-in., 4-in., and 3-in. cast-iron water pipes and specials, sluice valves, hydrants, etc., for the Deudraeth R.D.C. Quantities from Mr. Llewellyn Lloyd Jones, Engineer, Carnarvon.

JUNE 13.—**London.**—BOILERS, ETC.—For works at the North-Western Fever Hospital, Lawn-road, Hampstead, N.W.:—(*a*) The installation of new steam boilers and incidental work; (*b*) providing and fixing temporary steam boilers and pipes. Specifications at the Office of the Metropolitan Asylums Board, Embankment, E.C. Deposits, £5 for (*a*) and £1 for (*b*).

JUNE 18.—**Manchester.**—GAS APPARATUS.—Supply and erection of a Livesey washer, for the Manchester Corporation Gas Department. Specification of Mr. Fredk. A. Price, Superintendent, Gas Department, Town Hall, Manchester.

JUNE 18.—**Manchester.**—ROTARY WASHER SCRUBBER.—Supply and erection of a rotary washer scrubber, for the Manchester Corporation Gas Department. Specification of Mr. Fredk. A. Price, Superintendent, Gas Department, Town Hall, Manchester.

JUNE 20.—**Dublin.**—BOILERS.—For two steam boilers at the public baths and washhouses, Tara-street. Form of tender of Mr. Michael J. Buckley, Borough Surveyor, Castle-street, Dublin. Deposit, £1 1s.

* JUNE 24.—**West Norwood.**—INSTALLATION OF HEATING SYSTEM.—The Lambeth Guardians invite tenders for work in connection with installation of a heating system.

ROAD, SANITARY, AND WATER WORKS.

JUNE 8.—**Leeds.**—PAVING.—For paving and flagging of the following private streets:—Cross Flatts-terrace, Cross Flatts-crescent, Parkfield-place, Back Parkfield-road. Quantities at the Highways and Permanent Ways Department, 155, Kirkstall-road, Leeds.

JUNE 8.—**Manchester.**—STREET WORKS.—Sewering and paving of Coleridge-street, Newton Heath; Ashwood-avenue and Woodland-avenue, Gorton; Gore-street, Gorton; Holmfield-avenue, Holmfield-avenue West, and Brantwood-terrace, Moston, etc. Forms of tender of the Paving, etc., Department (District Surveyor's Office), Town Hall, Manchester.

JUNE 8.—**Mytholmroyd.**—WATER MAIN.—Excavation required in laying a water main from Upperfoot to White Lee-terrace, Burnley main road, Mytholmroyd, a distance of about 2,000 yds. Particulars of Mr. S. Sutcliffe, Surveyor, Council Offices, Mytholmroyd.

JUNE 9.—**Honley.**—IMPROVEMENT.—Carrying-out of Eastgate Improvement, for the Honley U.D.C. Quantities of Messrs. J. Berry & Sons, architects and surveyors, 3, Market-place, Huddersfield.

JUNE 9.—**Lewisham.**—PAVING, ETC.—For kerbing, channelling, and metalling the roadways and paving the footpaths with artificial stone (in two contracts in each case) of Buckthorne-road (part of), Brockley, and Thornsbeach-road (part of), Catford, for the Lewisham B.C. Specification, etc., at the Town Hall, Catford.

JUNE 9.—**Southall-Norwood.**—DRAINAGE.—For supplying and laying concrete surface-water sewers, together with twenty-seven manholes and appurtenant works, for the Southall-Norwood U.D.C. Quantities of Mr. Reginald Brown, Engineer to the Council, Town Hall, Southall.

JUNE 9.—**South Bank.**—STREET WORKS.—For making-up footpath, Middlesbrough-road, for the U.D.C. Quantities of Mr. C. W. Cockersoll, Surveyor, Normsby-road, South Bank.

JUNE 9.—**Tottenham.**—ASPHALT.—For the repair of the tar and asphalt paving throughout the district of the Tottenham U.D.C. for twelve months. Specifications of Mr. W. H. Prescott, M.Inst.C.E. Engineer, Town Hall, Tottenham.

JUNE 10.—**Birmingham.**—SEWER.—Construction of about 600 yds. of 9-in. stoneware pipe sewer and other incidental works in Flaxley-lane, Stechford, for the Corporation. Quantities of Mr. Henry E. Stilgoe, M.Inst.C.E., City Engineer and Surveyor, The Council House, Birmingham. Deposit, £2.

JUNE 10.—**Durham.**—WATER MAINS.—Construction of 6,534 lin. yds. of 4-in. and 3-in. cast-iron water mains, etc., for the Durham R.D.C. Quantities of Mr. Geo. Gregson, Surveyor to the Council, Durham. Deposit, £1.

JUNE 10.—**Goole.**—SEWERS.—Construction of branch sewers and connections, consisting of about six miles of stoneware pipe sewers, with manholes and appurtenances, etc., for the Goole U.D.C. Quantities of the Clerk to the Council. Deposit, £5.

JUNE 10.—**St. Helens.**—STREET WORKS.—Macadamising with tarred or similar materials of the carriageway of Wynne-road for the Corporation. Specification of Mr. Arthur W. Bradley, M.Inst.C.E., the Borough Engineer.

JUNE 11.—**Bury.**—SEWER.—Construction of about 91 lin. yds. of brick sewer, 5 ft. internal diameter, the reconstruction of manholes, etc., for the Corporation. Quantities of Mr. J. Ainsworth Settle, the Borough Engineer, Corporation Offices, Bury. Deposit, £2 2s.

JUNE 12.—**Blaenrhondda.**—VARIOUS WORKS.—Levelling and draining ground and building retaining walls, etc., for proposed bowling green and quoit ground at Blaenrhondda, for the Fernhill and Blaenrhondda Collieries workmen. Quantities of Mr. W. D. Morgan, M.S.A., architect, 194, Ystrad-road, Pentre, Rhondda. Deposit, £1 1s.

JUNE 12.—**Rathmines.**—SEWERS.—Laying of sewers in Ranelagh, Leeson Park, and Rathgar Districts for the Rathmines U.D.C. Specifications at the Engineer's Office, Town Hall, Rathmines. Deposit, £1 1s. for each of the two contracts.

[Those with an asterisk (*) are advertised in this issue.]

ROADS, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 12.—**Rhondda.**—WIDENING.—For the widening of Baglen-street, for the Rhondda U.D.C. Specification of Mr. E. Taylor, Acting Engineer, Council Offices, Pentre. Deposit, £1 1s.

JUNE 13. — **Mountmellick.** — WATERWORKS.—Laying of 5-in. cast-iron main from service reservoirs at Pallas to Ross Bridge, etc., for the Mountmellick R.D.C. Specification of Mr. Joseph P. Bannon, C.E., Maryborough. Deposit, £2 2s.

* JUNE 23. — **Lambeth.** — SANITARY FITTINGS, ETC.—The Lambeth Guardians invite tenders for supply and fixing of waste and soil pipes and sanitary fittings.

* JUNE 23. — **London.** — TAR-PAVING. — The London C.C. invite tenders for tar-paving at various schools.

Public Appointments.

* JUNE 18.—DEPÔT FOREMAN.—The Lambeth B.C. invite applications for the above position. Salary, £2 10s.

* NO DATE.—LECTURER.—The C.B. of Huddersfield invite applications for the post of chief lecturer in building trade subjects. Salary, £175.

* NO DATE.—FOREMAN OF WORKS.—The Crown Agents for the Colonies invite applications for the above post in Sierra Leone. Salary, £250, furnished quarters, etc.

Auction Sales.

* JUNE 9.—**Chelsea.**—Messrs. Protheroe & Morris will sell by auction, at the Mart, a freehold building estate.

* JUNE 9.—**Finchley.**—Mr. E. Owers will sell by auction, at the Mart, freehold building land.

* JUNE 10.—**Hanover-square.**—Messrs. H. E. Foster & Cranfield will sell by auction, at the Mart, freehold property.

* JUNE 10.—**Hullbridge and Greenwich.**—Messrs. Douglas Young & Co. will sell by auction, at the Mart, freehold property and building land.

* JUNE 16.—**Herne Hill.**—Messrs. Hooker & Webb will sell by auction, on the premises, timber, building material, and fittings.

* JUNE 16.—**Ilford.**—Daniel Smith Son, & Oakley will sell by auction, at the Mart, a freehold building estate.

* JUNE 16.—**Old Kent-road.**—Mr. H. W. Smith will sell by auction, on the premises, the stock, plant, and furniture, etc., of a tile manufacturer.

* JUNE 17.—Messrs. Churchill & Sim will sell by auction, at the Great Hall, Winchester House, Old Broad-street, E.C., an assortment of deals, battens, boards, timbers, etc.

* JUNE 18.—**Willesden.**—Messrs. J. T. Skelding & Co. will sell by auction, on the premises, builders' stock, plant, machinery, and paperhangings.

* JUNE 23.—**Hillingdon and Uxbridge.**—Messrs. Knight, Frank, & Rutley will sell by auction, at 20, Hanover-square, the Hillingdon House Estate.

* JUNE 23.—**Maidenhead.**—Messrs. Douglas Young & Co. will sell by auction, at the Town Hall, freehold building land.

* JUNE 24.—**Chingford.**—Messrs. Douglas Young & Co. will sell by auction, at the Mart, freehold building land.

* JUNE 24.—**Herne Bay.**—Messrs. Debenham, Tewson, & Chinnocks will sell by auction, at Queen's Hotel, freehold building land.

* JUNE 24.—**Westminster.**—Messrs. Fuller, Horsey, Sons, & Cassell will sell by auction, at the Mart, a leasehold builder's and contractor's works, with plant and machinery.

* JUNE 25.—**Wallington.**—Messrs. Daniel Watney & Sons will sell by auction, at the Mart, freehold building land.

* JULY 16.—**Reading.**—Messrs. Farebrother, Ellis, & Co. will sell by auction, at the Mart, freehold property.

[Those with an asterisk (*) are advertised in this issue.]

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£	s.	d.
Best Stocks	1	16	6
Picked Stocks for Facings	2	10	0

Per 1000, Delivered at Railway Depôt.	£	s.	d.		£	s.	d.
Flettons	1	14	0	Best Blue Pressed Staffordshire	3	15	0
Best Fareham Red	3	12	0	Do. Bullnose	4	0	0
Best Red Pressed Ruabon Facing	5	0	0	Best Stourbridge Fire Bricks	4	0	0

GLAZED BRICKS—

Best White, Ivory, and Salt Glazed Stretchers	12	7	6	Double Headers	14	17	6
				One Side and two Ends	13	17	6
Headers	11	17	6	Two Sides and one End	19	17	6
Quoins, Bullnose and 4½ in. Flats	15	17	6	Splays and Squints	17	7	6
D'bleStr'tch'rs	17	17	6				

Second Quality £1 10s. per 1000 less than best.

	s.	d.	
Thames and Pit Sand	7	0	per yard, delivered.
Thames Ballast	5	9	" "
Best Portland Cement	37	0	per ton, "
Best Ground Blue Lias Lime	20	0	" "

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 14s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly. dpt.

STONE.

Per Ft. Cube.

	s.	d.
BATH STONE—delivered on road waggons, Paddington Depôt	1	7½
Do. do. delivered on road waggons, Nine Elms Depôt	1	9½
PORTLAND STONE (20 ft. average)—		
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	4½
White Basebed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	6½

Per Ft. Cube, delivered at Railway Depôt.	s.	d.		s.	d.
Ancaster in blocks	1	10	Closeburn Red Freestone	2	0
Beer in blocks	1	6			
Greenshill in blocks	1	10	Red Mansfield Freestone	2	4
Darley Dale in blocks	2	4	Talacre & Gwespyr Stone	2	4
Red Corsehill in blocks	2	3			

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
Scappled random blocks	2	10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	8
6 in. rubbed two sides ditto, ditto	2	6
3 in. sawn two sides slabs (random sizes)	0	11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0	7
1½ in. to 2 in. ditto, ditto	0	6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.		
Scappled random blocks	3	0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2	8
6 in. rubbed two sides ditto	3	0
3 in. sawn two sides slabs (random sizes)	1	2
2 in. self-faced random flags	0	5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
20 x 10 best blue Bangor	13	2	6	20 x 10 best Eureka unfading green	15	17	6
20 x 12 ditto	13	17	6	20 x 12 ditto	16	7	6
20 x 10 1st q'lity ditto	15	0	0	18 x 10 ditto	13	5	0
20 x 12 ditto	13	15	0	16 x 8 ditto	10	5	0
16 x 8 ditto	7	5	0	20 x 10 permanent green	11	12	6
22 x 10 best blue Portmadoc	12	12	6	18 x 10 ditto	9	12	6
16 x 8 ditto	6	12	6	16 x 8 ditto	6	12	6

TILES.

At Railway Depôt.

	s.	d.		s.	d.
Best plain red roofing (per 1000)	42	0	Best "Hartshill" brand, plain sand-faced (per 1000)	45	0
Hip and Valley (per doz.)	3	7	Do. pressed (per 1000)	42	6
Best Broseley (per 1000)	50	0	Do. Ornamental (per 1000)	47	6
Do. Ornamental (per 1000)	52	6	Hip (per doz.)	4	0
Hip and Valley (per doz.)	4	0	Valley (perdoz.)	3	6
Best Ruabon red brown, or brindle (Edw'ds) (per 1000)	57	6	Staffords. (Hanley) Reds or Brindled (per 1000)	42	6
Do. Ornamental (per 1000)	60	0	Hand-made sand-faced (per 1000)	45	0
Hip (per doz.)	4	0	Hip (per doz.)	4	0
Valley (perdoz.)	3	0	Valley (per doz.)	3	6

WOOD.

BUILDING WOOD. At per standard.	£	s.	d.		£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	15	0	0	..	16	10	0
Deals: best 3 in. by 9 in.	15	0	0	..	16	0	0
Battens: best 2½ in. by 7 in. and 3 in., and 3 in. by 7 in. and 8 in.	12	10	0	..	13	10	0
Battens: best 2½ by 6 and 3 by 6	0	10	0	less than 7 in. and 8 in.			
Deals: seconds	1	0	0	less than best			
Battens: seconds	0	10	0	" "			
2 in. by 4 in. and 2 in. by 6 in.	11	10	0	..	12	10	0
2 in. by 4½ in. and 2 in. by 5 in.	10	10	0	..	11	10	0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0	10	0	more than battens.			
¾ in.	1	0	0	"			
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5	0	0	..	6	5	0
Seconds	4	10	0	..	5	0	0
Small timber (8 in. to 10 in.)	3	17	6	..	4	0	0
Small timber (6 in. to 8 in.)	3	5	0	..	3	10	0
Swedish balks	2	12	6	..	3	0	0
Pitch-pine timber (30 ft. average)	7	0	0	..	8	0	0

JOINERS' WOOD. At per standard.	£	s.	d.		£	s.	d.
White Sea: first yellow deals, 3 in. by 11 in.	26	0	0	..	27	0	0
2 in. by 9 in.	24	0	0	..	25	0	0
Battens, 2½ in. and 3 in. by 7 in.	18	10	0	..	19	10	0
Second yellow deals, 3 in. by 11 in.	21	10	0	..	22	10	0
Do. 3 in. by 9 in.	20	0	0	..	21	0	0
Battens, 2½ in. and 3 in. by 7 in.	15	0	0	..	16	0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	16	0	0	..	17	0	0
Battens, 2½ in. and 3 in. by 7 in.	14	0	0	..	15	0	0
Petersburg: first yellow deals, 3 in. by 11 in.	23	0	0	..	24	0	0
Do. 3 in. by 9 in.	20	0	0	..	21	0	0
Battens	15	0	0	..	16	0	0
Second yellow deals, 3 in. by 11 in.	17	10	0	..	18	10	0
Do. 3 in. by 9 in.	16	0	0	..	17	0	0
Battens	12	10	0	..	13	10	0
Third yellow deals, 3 in. by 11 in.	14	0	0	..	15	0	0
Do. 3 in. by 9 in.	13	10	0	..	14	10	0
Battens	11	10	0	..	12	10	0

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)— At per standard.	£	s.	d.		£	s.	d.
White Sea and Petersburg— First white deals, 3 in. by 11 in.	16	10	0	..	17	10	0
First white deals, 3 in. by 9 in.	14	10	0	..	15	10	0
Battens	13	0	0	..	13	10	0
Second white deals, 3 in. by 11 in.	14	10	0	..	15	10	0
Second white deals, 3 in. by 9 in.	13	0	0	..	14	0	0
Battens	12	0	0	..	12	10	0
Pitch-pine: deals	28	0	0	..	30	0	0
Under 2 in. thick extra	0	10	0	..	1	0	0
Columbian or Oregon Pine, best quality	24	0	0	..	26	10	0
Yellow Pine—First, regular sizes	50	0	0	upwards.			
Oddments	35	0	0	"			
Seconds, regular sizes	36	0	0	"			
Oddments	31	0	0	"			
Kauri Pine—Planks per ft. cube	0	6	6	..	0	7	6
Danzig and Stettin Oak Logs—Large, per ft. cube	0	3	0	..	0	3	9
Small " "	0	2	6	..	0	3	0
Wainscot Oak Logs, per ft. cub.	0	8	0	..	0	10	0
Dry Wainscot Oak, per ft. super. as inch	0	0	10	..	0	1	2
¼ in. do. do.	0	0	9	..	0	1	0
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch	0	0	10	..	0	1	3
Selected, Figury, per ft. super. as inch	0	1	6	..	0	2	6
Cuba Mahogany	0	1	4	..	0	2	6
				upwards.			
Dry Walnut, American, per ft. super. as inch	0	0	10	..	0	1	2
French, "Italian," Walnut	0	0	10	..	0	1	4
Teak, per load (Rangoon or Moulmein)	25	0	0	..	31	0	0
Do., do. (Java)	22	0	0	..	25	0	0
American Whitewood planks, per ft. cube	0	6	0	..	0	7	0
Prepared Flooring, etc.—				Per square.			
1 in. by 7 in. yellow, planed and shot	0	14	6	..	0	18	0
1 in. by 7 in. yellow, planed and matched	0	14	9	..	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	17	6	..	1	3	0
1 in. by 7 in. white, planed and shot	0	14	0	..	0	16	0
1 in. by 7 in. white, planed and matched	0	14	3	..	0	16	6
1¼ in. by 7 in. white, planed and matched	0	16	6	..	0	18	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed boards	0	12	6	..	0	15	0
1 in. by 7 in. " "	0	15	0	..	0	18	6
¾ in. by 7 in. white " "	0	12	0	..	0	14	0
1 in. by 7 in. " "	0	14	6	..	0	16	6

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £	s.	d.
Rolled Steel Joists, ordinary sections	9	0	0
Compound Girders, ordinary sections	11	0	0
Steel Compound Stanchions	12	0	0
Angles, Tees, and Channels, ordinary sections	11	0	0
Fitch Plates	11	0	0
Cast Iron Columns & Stanchions, including ordinary patterns	8	10	0

	£	s.	d.		£	s.	d.
Cast Iron Columns & Stanchions, including ordinary patterns	8	10	0	..	9	0	0

METALS.

	Per ton, in London. £	s.	d.		£	s.	d.
IRON— Common Bars	9	0	0	..	9	10	0
Staffordshire Crown Bars, good merchant quality	9	5	0	..	9	15	0
Staffordshire "Marked Bars"	11	0	0	..	—		
	9	5	0	..	9	15	0
Mild Steel Bars	10	0	0	..	—		
Hoop Iron, basis price	10	0	0	..	—		
" Galvanised	17	10	0	..			

" " (* And upwards, according to size and gauge.)

METALS (*Continued*).

	Per ton, in London. £ s. d.	£ s. d.
IRON (*Continued*)—		
Sheet Iron Black—		
Ordinary sizes to 20 g.	10 5 0 ..	—
24 g.	11 5 0 ..	—
" " 26 g.	12 15 0 ..	—
Sheet Iron, Galvanised, flat, ordinary quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ..	—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ..	—
Ordinary sizes to 26 g.	17 0 0 ..	—
Sheet Iron, Galvanised, flat, best quality—		
Ordinary sizes to 20 g.	18 10 0 ..	—
" " 22 g. and 24 g.	19 0 0 ..	—
Ordinary sizes to 26 g.	20 10 0 ..	—
Galvanised Corrugated Sheets—		
Ordinary sizes, 6 ft. to 8 ft. 20 g.	15 0 0 ..	—
Ordinary sizes, 22 g. and 24 g.	15 5 0 ..	—
Ordinary sizes, 26 g.	16 15 0 ..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ..	—
Best Soft Steel Sheets, 22 g. & 24 g.	13 10 0 ..	—
Best Soft Steel Sheets, 26 g.	15 10 0 ..	—
Cut Nails, 3 in. to 6 in.	11 0 0 ..	11 10 0
(Under 3 in., usual trade extras.)		

LEAD, &c.

Delivered in London.

	£ s. d.	
LEAD—Sheet, English, 4 lb. and up	22 0 0 ..	—
Pipe in coils	22 10 0 ..	—
Soil pipe	25 10 0 ..	—
Compo pipe	25 10 0 ..	—
ZINC—Sheet— In casks of 10 cwt.		
Vieille Montagne	28 0 0 ..	—
Silesian	27 10 0 ..	—
Zinc, in bundles, 1s. per cwt. extra.		
COPPER—		
Strong Sheet per lb.	0 1 2 ..	—
Tin " "	0 1 2 ..	—
Copper nails "	0 1 1 ..	—
Copper wire "	0 1 1 ..	—
BRASS—		
Strong Sheet per lb.	0 1 1 ..	—
Thin "	0 1 2 ..	—
TIN—English Ingots "	0 1 10 ..	—
SOLDER—Plumbers' "	0 0 10 ..	—
Tinmen's "	0 1 1 ..	—
Blowpipe "	0 1 3 ..	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	2d.	32 oz. thirds	5½d.
21 oz. thirds	3½d.	" fourths	4½d.
" fourths	3d.	Fluted Sheet, 15 oz.	3d.
26 oz. thirds	4½d.	21 oz.	4d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

¼ Rolled plate	2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral white	3½d.
¼ Rough rolled and rough cast plate	2½d.		
¼ Rough rolled and rough cast plate	3d.	Dit'o, tinted	5d.

* Not less than two crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 2 2
" " " in barrels	"	0 2 3
" " " in drums	"	0 2 5
Boiled " " in barrels	"	0 2 5
" " " in drums	"	0 2 8
Turpentine in barrels	"	0 2 8
" in drums	"	0 2 10
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	29 15 0
Red Lead, Dry	per ton	28 0 0
Best Linseed Oil Putty	per cwt.	0 2 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Brunswell Plating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 6
French and Brush Polish	0 10 0

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Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 6 p.m. on *Wednesday*. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

BLACKBURN.—For erection of superstructure of three public halls in Northgate, for the Town Council:—
Woof, Conshaw, & Co., Blackburn* £59,978

BRIGHTON.—For erection of infants' department at Coombe-road School, for the Education Committee:—
R. Cook & Sons, Cawley* £5,458

BROADSTAIRS.—Erection of Council school, etc., at Broadstairs, for Kent Education Committee:—
J. T. May, Broadstairs* £5,650

EAST STOW.—For the erection of cottages, for the East Stow Rural District Council:—

For Two Pairs of Cottages at Wetherden.
A. Plummer, Rattlesden* £798

For Five Pairs of Cottages at Combs.
H. J. Barbrook, Bury St. Edmund's* £2,027 10

For Four Pairs of Cottages at Old Newton.
H. J. Barbrook* £1,619

HUNGERFORD.—Erection of eight cottages, for the Rural District Council:—
G. Elms, Stockcross £1,310

LONDON COUNTY COUNCIL.—The following tenders have been accepted by the Education Committee of the London County Council:—

Installation of heating apparatus in schools:—

	Bethnal Green, S.W.		
Virginia-road	T. S. Knight & Sons	£750	0 0
	Camberwell, N.		
Cork-street	W. G. Cannon & Sons, Ltd.	877	0 0
	Lewisham.		
The "Hither-green"	Yetton & Brockett, Ltd.	961	0 0
	Wandsworth.		
Derinton-road	Hayward Bros. & Eckstein, Ltd.	935	0 0

For cleaning and painting schools during the summer recess:—

	Battersea.		
Battersea-park-road	Triggs & Co.	£659	0 0
	Bethnal Green, N.E.		
Cranbrook-road	Vigor & Co.	540	0 0
	Dulwich.		
Goodrich road	Triggs & Co.	604	0 0
	Fulham.		
Ackmar-road	Triggs & Co.	804	0 0
	Hackney, S.		
Homerton-row	W. Silk & Son	593	0 0
	Kensington, N.		
Wornington-road	T. Bendon, Ltd.	668	0 0
	Lewisham.		
Plassy-road	F. W. Lonsby	534	0 0
	Walworth.		
Surrey-square	Markham & Markham	562	0 0
	Bow and Bromley.		
Knapp-road	J. Scott Fenn	345	10 0
Malmesbury-road	Vigor & Co.	312	0 0
	Brixton.		
Santley-street	Rice & Son	370	0 0
	Clapham.		
Tennyson-street	Triggs & Co.	293	0 0
	Dulwich.		
The "Dulwich Hamlet"	W. P. Walton	212	15 0
	Hackney, S.		
Berkshire-road	G. Butters	£354	17 6
	Haggerston.		
Canal-road	W. Hornett	335	10 0
	Hampstead.		
New-end	J. Waddington & Sons, Ltd.	203	10 0
	Kennington.		
South Lambeth-road	F. W. Fletcher	320	0 0
	Lambeth, N.		
Addington-street	General Building Co.	298	10 0
	Lewisham.		
Brockley-road	W. Bailey	288	0 0
	Limehouse.		
Broad-street	W. Bailey	433	5 0
	Norwood.		
Sussex-road	W. Read	412	0 0
	St. Pancras, E.		
The "Stanley" Central	Stevens & Sons	427	0 0
	St. Pancras, W.		
Netley-street	Marchant, Hirst, & Co.	334	0 0
	Southwark, W.		
Pocock-street	H. & E. Lea	366	0 0
	Stepney.		
Settles-street	G. Barker	475	0 0
	Walworth.		
Sandford-row	Markham & Markham	266	0 0
Westmoreland-road	W. Chappell	225	0 0
	Woolwich.		
Bloomfield-road	A. Morris Fenn	473	0 0
Earl-street	Hodgin & Son	287	0 0
	Outside the County.		
Gordon House	G. W. Heasler	294	0 0
	Bethnal Green, S.W.		
Abbey-street (M.D.)	S. Blow, Ltd.	109	19 0
	Brixton.		
Acre-lane Residential	Maxwell Bros., Ltd.	52	0 0
	Clapham.		
Linden Lodge Residential	Triggs & Co.	45	0 0
	Deptford.		
The "Hatcham" (P.D.)	Finch & Finch	45	10 0
	Fulham.		
Beaufort House (M.D.)	G. McArthur & Co.	76	0 0
	Greenwich.		
Lombard-wall	E. Mills	143	0 0
	Hackney, S.		
Homerton Residential	Toop & Son	170	0 0
Stormont House	Toop & Son	77	0 0
	Haggerston.		
Maidstone-street	J. C. Mather	181	0 0
Shap-street	J. C. Mather	174	0 0
	Hammersmith.		
Waterloo-street	T. Bendon, Ltd.	182	0 0
	Kennington.		
Priory-road (M.D.)	F. W. Fletcher	148	0 0
	Kensington, N.		
Faroe-road (P.D.)	T. W. Heath & Son	25	0 0
Middle-row (J.M.)	Bristow & Eatwell	120	0 0
	Norwood.		
Rosendale-road Elementary and Turney-road Special	W. P. Walton	146	0 0
Woodland-road	T. Brown & Son	168	0 0
	Poplar.		
Piggott-street (M.D. and P.D.)	E. Burns & Co.	183	8 0
	St. Pancras, S.		
Prospect-terrace	E. Pollard & Co., Ltd.	103	18 8
	Walworth.		
Mina-road Central	W. Bailey	110	0 0
	Wandsworth.		
Oak Lodge Residential	Triggs & Co.	77	0 0
	Woolwich.		
Greening-street	J. Scott Fenn	87	16 0
The "Timbercroft"	E. Mills	193	0 0

LOWER HALSTOW.—For drainage work at schools, for the Kent Educational Committee:—
T. & A. Brittenden* £238

MANCHESTER.—For erection of a proposed picture palace, Oxford-road, All Saints, Manchester, for the Grosvenor Picture Palace, Ltd. Mr. Percy Hothersall, architect and surveyor, 426, Bury New-road, Prestwich:—

J. Gerrard & Sons, Ltd.	£9,715	S. Megarity & Co.	£9,247
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J. H. Billings & Co.	9,480	A. Hodkinson	9,227
Burgess & Galt	9,405	Fernley & Sons	9,160
J. I. Hollinworth	9,397	W. Rigby, Ltd., Radcliffe*	9,150

OXFORD.—For the alterations and additions to Messrs. F. Coopers, Ltd.'s factory, Oxford. Messrs. Homer & Lucas, architects, Evelyn House, 62, Oxford-street, W. Quantities by Mr. G. Silvester, 7, Adam-street, Adelphi, W.C.:—

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Acme Flooring & Paving Co., Ltd.	9 3	9 3	9 0	13 10	14 2
W. Griffiths & Co., Ltd.	9 2	9 2	9 2	13 11½	14 2
Improved Wood Pavement Co., Ltd.*	9 0	9 0	9 0	13 7	13 9
G. Wimpey & Co.	—	—	—	14 9	14 8

LEYTON.—For erection of additional office accommodation at Public Health Department and mess-rooms at Sewage Disposal and Destructor Works. Mr. E. H. Essex, Surveyor, Urban District Council Offices, Leyton:—

—	Additional office accommodation.	Mess-room, sewage disposal works.	Mess-room, destructor works.	Total
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
F. J. Coxhead	153 15 0	152 15 0	142 15 0	449 5 0
H. C. Horswill, Forest Gate	140 0 0*	129 0 0	118 0 0*	396 0 0
Humphreys, Ltd., Knightsbridge	154 0 0	119 0 0*	120 0 0	393 0 0
E. A. Russell	—	—	137 0 0	137 0 0
H. Wilson	154 16 0	148 0 4	135 5 1	438 1 5

NEWTONGRANGE.—For Newtongrange Picture Palace, for the Dean Tavern Committee, Newtongrange, Midlothian. Mr. A. Murray Hardie, Licentiate R.I.B.A., 20, George-street, Edinburgh. Quantities by Mr. G. Morham, F.F.S., 29, Hanover-street, Edinburgh:—

Mason: S. Hair, Dalkeith* £2,239
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Steel: R. Brown, Edinburgh* 269
Glaziers: Dickson & Walker, Edinburgh* 60

ONGAR.—Erection of school, for the Essex Education Committee:—

F. M. Noble, Ongar* £5,011 16 3

PONTYPRIDD.—For additions, painting, etc., to the Tylors Hotel, Tylorstown, for Mr. J. Griffith Jones. Quantities by Messrs. A. O. Evans, Williams, & Evans, architects, Pontypridd:—

W. D. Humphreys, Tylorstown* £795

REIGATE.—Making up Oakdene-road, Brockham, for the Reigate Rural District Council:—

W. Whitmore* £273

SHOEBURYNESS.—For office accommodation at Richmond-avenue School, for the Essex Education Committee:—

A. Ventris* £120

SOUTHALL (Middlesex).—For the erection of a new Council school in Beaconsfield-road, Southall, for the County Council of Middlesex. Mr. H. G. Crothall, F.R.I.B.A., Architect to the Education Committee:—

Fassnidge & Son	£12,654 0	A. Fairhead & Son	£11,643 0
E. Plaistowe ...	12,232 12	W. J. Dickens...	10,989 0
Mattock Bros....	11,856 0	G. Neal	10,849 0
W. Lawrence & Son	11,781 0	A. Monk	10,787 0
W. Lacey	11,367 0	H. Knight & Son, Tottenham‡	10,621 0
A. & B. Hanson	11,145 0		

‡ Recommended for acceptance.

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R. Fisher (Section 1)* £6,600
W. T. Weir (Section 2)* 2,729

ULVERSTON.—For the construction of a boundary wall (about 701 yds.), for the Urban District Council. Mr. C. Telford Hague, Surveyor, Town Hall, Ulverston:—

Harrison & Johnson £554 15 0
T. Iddon 543 5 0
H. Birch, Lindale-in-Cartmell 541 1 9

WEST HAM.—For street works, for the West Ham Town Council:—

G. J. Anderson, Poplar* £2,595 5 6

WESTWELL.—Alterations at Council schools, for the Kent Educational Committee:—

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